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THE UNIVERSITY OF ALBERTA

THE CULTURAL CONTEXT OF INFANT FEEDING AMONG THE NORTHERN ALBERTA WOODLANDS CREE

by

Wendy Lee Neander

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND
RESEARCH
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF NURSING

FACULTY OF NURSING

EDMONTON, ALBERTA
SPRING 1988

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Supervisor

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David E. Young

Date nov 13 1987

Dedication

This thesis is dedicated to my family. To my mother who inspired and encouraged me to further my knowledge and respect the innate knowledge of all human beings.

To my husband, Tom for his sensitivity and compassion for all human beings, which I so strongly admire. For his intellectual ability and creativity which constantly stimulate me. And finally, for his essential and special help in the production of this thesis and for his infinite patience and understanding.

To my sons Jan and Nels, whose beautiful smiles and special cuddles were the most welcome reward after a long day.

ABSTRACT

The purpose of this research was to develop an understanding of the cultural context of infant feeding for the northern Alberta Woodlands Cree. Ethnographic methods were used to document traditional and present-day infant feeding practices. Informants were northern Alberta Woodlands Cree traditional birth attendants, elderly multigravidas, present-day mothers and the husbands of two of the women. Data were collected from participant observation and unstructured interviews. Interviews were content-analyzed for recurrent patterns of these mothers' experiences of infant feeding.

Traditional infant feeding practices and beliefs were rooted in the survival of their people during times of limited resources and harsh weather conditions. These beliefs and practices promoted healthy childbearing and successful lactation for Woodlands Cree mothers. Despite the introduction of new methods of infant feeding, traditional practices and beliefs remain a strong element of elderly multigravidas' and traditional birth attendants' perceptions of how to feed and care for an infant.

Despite changes in lifestyle and the concurrent changes in infant feeding, present-day mothers still engage in some traditional infant feeding and care practices. These mothers persist in following cultural prescriptions for breastfeeding and, furthermore, maintain traditional beliefs with respect to infant feeding and care.

Present-day mothers transference from breast to bottle feeding coupled with shorter duration of breastfeeding is related to lifestyles which are not conducive to breastfeeding. These mothers attest to the value of breastmilk for a baby, but are unable to successfully breastfeed within the exigencies of their current lifestyles. For these women, the tailoring of breastfeeding to fit mothers' lifestyles is necessary for successful breastfeeding. Further, childbearing has been removed from the context of its culture and mothers are

without social support for childbirth and infant feeding. The overall effect of this removal of childbearing from its cultural context for this group of people remains undetermined.

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I. INTRODUCTION

The shift from nomadic to sedentary village life has resulted in many changes for Native Canadians. Village life increased the Native Canadians' contact with the outside world (Schaefer, 1971; Sisters of Providence, 1974). In particular, the Native Canadian was exposed to new dietary, health and illness practices and beliefs (Schaefer, 1971; Sisters of Providence, 1974). These practices included the introduction of new infant feeding technologies, such as bottles, nipples and milk substitutes (Hildes & Schaefer, 1973; Schaefer, 1971, 1977; Timmermans & Gerson, 1980).

Research has shown that changes in infant feeding practices occur within the context of culture (Chowning, 1985; Ebrahim, 1976; Gonzales, 1963; Harrel, 1981; Jenkins, Orr-Ewing & Heywood, 1985; Lepowsky, 1985; Maclean, 1966; Marshall & Marshall, 1970; Morse, 1985; O'Gara & Kendall, 1985; Ojofeitimi, 1981; Raphael, 1979; Schieffelin, 1985). Although new infant feeding methods are introduced into communities, traditional beliefs and practices with respect to infant feeding are not lost. These findings emphasize the importance of understanding the cultural ideology underlying infant feeding practices rather than merely acknowledging isolated customs. Nurses need to be cognizant of contrasting beliefs, because practices which may appear to be similar among two or more cultures, may have 'invisible" underlying beliefs which are radically at odds. Obviously, education and intervention may not have the same implications for all societies which exhibit similar infant feeding practices, but whose underlying beliefs differ.

Infant feeding research has focussed largely on medical and nutritional benefits, and consequences, of feeding practices (Cunningham, 1979; Ellestad-Sayed, Coodin, Dilling & Haworth, 1979; Hildes & Schaefer, 1973; Lawn, 1985; Saarinen, Kajassari & Blackman, 1981; Schaefer, 1971, 1977; Stewart & Steckle, 1987; Tarnow-Mordi, 1974; Timmermans & Gerson, 1980; Villar & Belizan, 1981; Wade, 1974). This research (mainly concerned with medical issues) does not consider infant feeding practices within their cultural and historical contexts, but rather the research focuses on the pathophysiological ramifications of bottlefeeding. In those cases in which researchers used ethnographic methods to investigate infant feeding practices from the mother's perspective, data did not support existing medical theories (Morse, 1982, 1985; Rapheal & Davis, 1985). Clearly, an understanding of infant feeding practices within their cultural and historical contexts must be achieved before health programs are developed, and before traditional infant feeding practices are manipulated.

As is the case with infant feeding research in general, investigations of Canadian Native infant feeding practices have examined primarily nutritional and medical benefits, and consequences (Ellestad-Sayed, et. al.,1979; Hildes & Schaefer, 1973; Lawn, 1985; Schaefer, 1971, 1977; Schaefer & Spady, 1982; Stewart, 1984; Timmermans & Gerson, 1980). In response to existing research, government programs have been initiated to prevent and counteract the consequences of infant feeding practices (i.e.,'baby-bottle mouth' pamphlets). However, a dearth of knowledge remains about the cultural context of Native Canadian infant feeding practices, and there exists little understanding of the caregivers' point of view concerning infant feeding practices.

In the interests of providing a more comprehensive examination of Canadian Native infant feeding practices, research is needed in order to understand the cultural context of infant feeding. The purpose of this study was to document the cultural context of infant feeding practices and beliefs among the northern Alberta Woodlands Cree. A qualitative method was utilized to develop an understanding of the cultural ideology that underlies northern Alberta Woodlands Cree infant feeding practices. Since qualitative research elicits issues and beliefs from the subjects' perspective (Field & Morse, 1985; Le Compte & Goetz, 1982; Leininger, 1985; Mead, 1976; Morse, 1986; Reichardt & Cook, 1979; Swanson & Chenitz, 1982), it can give expression to the meaning which infant feeding practices and patterns have for the mother.

Investigations of the cultural context of infant feeding practices and beliefs among various ethnic groups have revealed gaps in professional knowledge (Morse, 1982, 1985; Raphael & Davis, 1985). By asking infant caregivers (i.e., mothers) directly to describe their experiences with respect to feeding infants, researchers have compiled valuable information (Gonzales, 1963; Jenkins, et. al., 1985; Lepowsky, 1985; Maclean, 1966; Marshall & Marshall, 1970; Morse, 1984, 1985; Morse, Harrison & Prowse, 1986; Raphael & Davis, 1985; Williams, 1986). At times, these data have been incongruous with professional knowledge of breastfeeding and weaning. For example, Morse, Harrison and Prowse (1986) discovered that mothers nursed their infants once or twice a day without cessation of lactation, despite professional advice that frequent milk expression was necessary to maintain lactation. The evidence suggests that participation of infant caregivers in infant feeding knowledge development is imperative.

As nurses are the primary provincial and federal health care providers in many Woodlands Cree communities, they are faced with the responsibility of providing education, support and intervention related to infant feeding. In order to provide effective care, nurses must be conscious of the meaning of infant feeding practices and beliefs to the Woodlands Cree. Nurses can expect to encounter Woodlands Cree clients in various clinical and home settings. The potential exists for prevention of infant feeding problems through timely and appropriate nursing intervention. Appropriate nursing intervention can be facilitated only if the infant caregiver's beliefs and practices are understood. This study provides a foundation for understanding (from the mother's perspective) northern Alberta Woodlands Cree infant feeding practices.

II. LITERATURE REVIEW

Until recently, research on infant feeding practices has largely focussed primarily on the nutritional and medical benefits, and consequences, of these practices (Cunningham, 1979; Ellestad-Sayed, et.al., 1979; Hildes & Schaefer, 1973; Saarinen, et. al., 1981; Schaefer, 1971, 1977; Tarnow-Mordi, 1974; Timmermans & Gerson, 1980; Villar & Belizan, 1981; Wade, 1974). In the last decade, nurses and anthropologists have investigated the cultural context of infant feeding practices and beliefs (Ebrahim, 1976; Gonzales, 1963; Harrel, 1981; Jenkins, et. al., 1985; Lepowsky, 1985; Maclean, 1966; Marshall & Marshall, 1970; Morse, 1984,1985; O'Gara & Kendall, 1985; Ojofeitimi, 1981; Raphael & Davis, 1985; Schieffelin, 1985). This research has identified variations of infant feeding practices and beliefs as well as changing patterns of infant feeding. Such variations have occurred as a function of urbanization and westernization. Most importantly, this research has documented the significance of understanding the cultural context of infant feeding.

Cultural Context of Infant Feeding

Infant feeding practices cannot be isolated from the underlying cultural ideology. Researchers have discovered multiple cultural, social, and economic variables which impact upon infant feeding practices (de Morale & Larkin, 1972; Evans, Walpole, Quereshi & Everly-Jones, 1976; Ghosh, Gidwani, Mittal & Verna, 1976; Gonzales, 1963; Hirschman & Sweet, 1974; Jenkins, et. al., 1985; Marshall & Marshall, 1970; Morse, 1984; Plank & Milanesi, 1973; Raphael & Davis, 1985; Sousa, Barros, Pinheiro & Gazalle, 1975; Wright, 1986). These variables include the identity of the infant's caregiver, definitional criteria of a healthy infant, educational achievement, wage employment, and urban or rural residence.

Breastfeeding

Researchers (Chowning, 1985; Conton, 1985; Gonzales, 1963; Maclean, 1966; Marshall & Marshall, 1970; Morse, 1985; Nardi, 1985; O'Gara & Kendall, 1985; Ojofeitimi, 1981) have identified cultural prescriptions and proscriptions with respect to breastfeeding. These prescriptions and proscriptions include the temporal initiation of breastfeeding, prelacteal feeds given to neonates, resumption of activities and responsibilities for the nursing mother; the permissibility of breastfeeding during pregnancy, and diet for the lactating female (which often includes special herbal mixtures to promote milk production). Cultural prescriptions surrounding breastfeeding ensure the successful establishment of lactation and maintenance of breastfeeding. For example, Nardi (1985) found that Western Samoan women were surrounded by helpful female relatives post-partally. The new mother was relieved of all chores and childcare except breastfeeding. Additionally, the Western Samoan mother was given warm baths and leisurely backrubs. Similarly, O'Gara and Kendall (1985) reported that Tegucigalpan women were excused from housework duties and received assistance with nursing their babies for forty days post-partum.

The choice to breastfeed has been shown to be influenced by a woman's culture (Bentovim, 1976; Ebrahim, 1976; Jones & Belsey, 1979; Kevany, Taylor, Kaliszer, Humphries, Torpey, Conway & Goldsmith, 1975; Solberg, 1981,1984). In rural communities, Ebrahim (1976) identified that breastfeeding is culturally rooted and serves to establish strong emotional bonds between mother and infant. In urban areas, acceptance of breastfeeding by a woman's cultural group (especially significant others) was found to significantly influence the mother's decisions to breastfeed and when to wean (Jones & Belsey, 1979; Kevany, et. al., 1975; Morse, et. al., 1986; Solberg, 1981,1984; Williams, 1986).

An influential cultural factor of the Amele of Lowland Papua New Guinea, is their belief that breast milk value increases as children mature. The Amele also believe that liquid foods are most suitable for small children (Jenkins, et. al., 1985). Understanding the Amele's beliefs clarifies the motives for the limited provision of supplementary food during the first year of life. In investigating beliefs about breastmilk in Tegucigalpa, Honduras, O'Gara and Kendall (1985) revealed that nursing mothers regulated their behaviors and emotions to prevent breastmilk from becoming too hot. Hot breastmilk was believed to incite gastrointestinal distress in an infant.

Cultural beliefs and practices regarding colostrum have been disclosed as well (Conton, 1985; Maclean, 1966; Morse, 1985; O'Gara & Kendall, 1985). Conton's (1985) investigations of the Usino of Papua New Guinea disclosed that colostrum was expressed initially and not fed to an infant as it is defined as "yellow", "dirty" or "sick" milk. Additionally, Morse's (1985) findings showed that the Fijian and Fijian-Indian groups withhold the breast from the infant for three to four days following birth, for different reasons. These findings emphasize the importance of grasping the cultural ideology underlying infant feeding practices rather than acknowledging singularly the customs. Nurses need to be aware of different cultural beliefs, because education and intervention may not have the same implications for all societies which hold similar infant feeding practices.

Variation in Infant Feeding Practices and Beliefs

Variation in infant feeding practices is another important theme to emerge from infant feeding research (Conton, 1985; Gonzales, 1963; Jenkins, et. al., 1985; Maclean, 1966; Morse, 1984, 1985; Morse, et. al., 1986; Raphael, 1979; Raphael & Davis, 1985; Williams, 1986; Wright, 1986). Areas in which variation have been observed include the decision to give or withhold colostrum, the option of using alternative feeding methods (i.e., breastfeeding, bottlefeeding or a combination of the two), choice of child's first foods, the age at which solids are introduced, and the age at which the child is weaned.

Withholding Colostrum

The custom of withholding colostrum from the infant is practiced in many societies (Conton, 1985; Maclean, 1966; Morse, 1984, 1985; O'Gara & Kendall, 1985). Yet, the beliefs underlying this custom and the food given to the infant following birth, vary. The following examples illustrate some of the differences. The Fijian infant is given water, or water and glucose, or coconut milk to suck from a rag, in place of colostrum as a response to the belief that colostrum is impure. If the Fijian infant is very hungry, he/she will be nursed by a close relative who is lactating (Morse, 1984). Similarly, the Fijian-Indian infant is also withheld from the breast as it is believed that there is no milk in the breast for three to four days. Prelacteal feeds for the Fijian-Indian infant include water, and a mixture of water and glucose, from a bottle. O'Gara and Kendall (1985) reported that 40 percent of Tegucigalpan mothers give infants traditional prelacteal feeds for their belief holds that colostrum is sub-standard milk. Traditional prelacteal feeds for Tegucigalpan infants consist of a piece of fabric dipped into herbal teas and honey.

In contrast to other cultures, the Yoruba infant's first feed is water, fed out of an adult's palm. A Yoruba female infant receives seven drops of water and a male infant nine drops. Following the birth of twins, the Yoruba carry out yet another feeding practice. The first food given to Yoruba twins is palm oil (Maclean,1966).

Breastfeeding

Rapheal (1973) has differentiated four types of 'breastfeeders' based on variations in lifestyle. The first breastfeeding type is the traditional culture. The kinship group is very supportive of the mother, as they recognize an investment in the child. The mother breastfeeds for the benefit of her child and family group. The mainland Chinese mother is an example of the second type of breastfeeder. The community is the focal point in China and supports the mother and infant. In China, the mother breastfeeds for the benefit of her child and country.

The western lifestyle directs a very different focus on infant feeding, in comparison to the traditional and community styles. Raphael (1973) cites independence as the theme of western lifestyle. Generally speaking, the physical needs of the infant are well met, but little support is offered to the mother. The reasons mothers give for breastfeeding are largely of a personal nature (Rapheal, 1979).

The urban poor represent the fourth breastfeeding type. The major preoccupation of poor mothers is to assure themselves and their infants an optimal level of survival. The urban poor still breastfeed, but also use other methods that work to their advantage (Raphael, 1979).

Weaning

Specific examples of infant feeding variation include the weaning practices of the Yoruba of Nigeria. For the Yoruba, weaning practices differ according to the sex of the child. Male children are allowed to nurse longer than females. Although male and female Yoruba infants are offered cornmeal gruel as a food supplement from the age of three months, they are not completely weaned from the breast until they are two or three-years-old (Maclean,1966).

In contrast to the Yoruba, the cultural beliefs of the Amele of lowland Papua New Guinea dictate that very little supplemental food is given before the infant's first birthday (Jenkins, et.al., 1985). As a result, Amele infants receive mainly breastmilk for the first year of life. Tegucigalpan mothers view the resumption of menses as the indicative time for weaning an infant. This view stems from the belief that the resumption of menses indicates that the mother is producing less milk and that the infant is receiving less milk.

O'Gara and Kendall (1985) found that 25 percent of the mothers they interviewed believed that breastmilk during menses is weak or hot, and not of benefit to the child. Another example of a weaning practice is the Usino (Papua New Guinea) mother who weans her infant gradually and believes the child should not be forced. Sometimes, however, Usino mothers apply ginger and chili pepper to their breasts to facilitate weaning (Conton, 1985).

Environmental and Social Conditions

It is important to note that research has disclosed that some sources of infant feeding variation are related to environmental and social conditions which populations do not control(Akin, 1985; Barlow, 1985; Carrier, 1985; Conton, 1985; Counts, 1985; Nardi, 1985). The types of infant feeding practices which these conditions influence vary among different groups. As a result of these conditions foods given to infants vary. The variation extends to the choice of the child's first foods, when foods are introduced and the age when weaning is initiated.

Women's participation in the work force has been identified as a factor influencing infant feeding practices, in particular, employment affects the age at which an infant is weaned. Nardi (1985) argues that the decline in weaning age in Western Samoa is related to an increase in women's workload as a result of participation in a cash economy. A decline in weaning age has also been uncovered by Carrier (1985) in Ponam Island Papua New Guinea, but without a concurrent increase in the women's workload.

Further investigation of infant feeding practices must center on the underlying cultural, social and economic sources of variation. This approach is necessary to determine the real implications of infant feeding practices. As researchers (Raphael & Davis, 1985) have identified, the reality of the situation can only be understood through the senses of the mother or infant caregiver. Only after an understanding has been attained, can nursing develop programs which will meet the pyschological, physiological and social needs of the mother and infant.

Traditional Practices Change with Modernization

As technological advances reach populations, infant feeding practices change. Researchers (Hildes & Schaefer, 1973; Schaefer, 1971, 1977; Timmermans & Gerson, 1980) maintain that nutritiona[illegible]edical consequences can be related to the adoption of new methods (i.e., infant formula and bottles) of infant feeding.

Investigations (Carrier, 1985; Chowning, 1985; Marshall & Marshall, 1970; Nardi, 1985; Rapheal & Davis, 1985) uncovered ~~various~~ factors related to changing patterns of infant feeding. These factors include changes in the domestic relations between husband and wife, the presence or absence of a support person or doula (Raphael, 1976) for the breastfeeding mother, increased workload of the mother, employment ~~of the mother~~ outside the home, and emulation of that which is thought to be westernized practices.

The Duration of Breastfeeding

Of concern to health care professionals is the worldwide decline in breastfeeding (Jelliffe & Jelliffe, 1979; Latham, 1977; Mata, 1978; Sjolin, Hofvander & Hillervik, 1977). In particular, the trend towards earlier weaning (before the infant is six months of age) worries health care professionals because breastmilk has been identified as the best source of nutrition for the first six months of life. This trend has been reported to be associated with an increased number of women participating in the work force as a result of modernization and westernization of societies (Harrell, 1981; Jimenez & Newton, 1979, Mata, 1978; Rapheal, 1979).

Despite the worldwide decline in breastfeeding, 70 percent of Canadian infants receive breastmilk for the first few weeks of life (McNally, et.al., 1985; Yeung, 1983). Additionally, it has been reported that the incidence of breastfeeding in the United States of America is also increasing (Martinez & Nalezienski, 1979). Nevertheless, the duration of breastfeeding remains relatively short given that the number of mothers who actually continue breastfeeding beyond three months is small (Fieldhouse, 1984; Magnus & Galindo, 1980; Wilkinson & Davies, 1978; Yeung, 1983).

With respect to Native Canadians, a recent survey has disclosed an increase in duration of breastfeeding (continuing until the infant was six months old) but a decline in the number of mothers who actually breastfed (Stewart & Steckle, 1987). Despite the increase in duration of breastfeeding among Native Canadian mothers, the finding must be tempered with the knowledge that the finding refers to only half of the mothers who did breastfeed. The incidence of breastfeeding remains lower for Native Canadians than that of non-native women in every region of Canada (Stewart & Steckle, 1987). Although statistics are available on the numbers who breastfeed, the Native Canadian mother's reasons for choosing a particular infant feeding method remain virtually unknown.

Insufficient Milk

Insufficient milk has been reported cross-culturally as a major reason for termination of breastfeeding (Davies & Thomas, 1976; Goodine & Fried, 1984; Greiner, Esterik &Latham, 1981; Gulick, 1982; Gussler & Briesemeister, 1980; Tully & Dewey, 1985; Whichelow, 1982). Gussler and Briesemeister(1980) have theorized that insufficient milk may be the result of the abandonment of traditional infant care practices, the breakdown of extended social networks, and interference of the let-down reflex. This theory, although criticized (Greiner, Esterik & Latham, 1981) is important in that it lends insight into a possible cause for the decline in breastfeeding in urban areas. Equally important is Gussler's and Briesemeister's (1980) explanation of the relationship of the physiological response of the let-down reflex to psychological and sociological influences.

Incorporation of Traditional Infant Feeding Practices

It has also been documented that traditional infant feeding beliefs and values are not lost with the introduction of new technologies (Chowing, 1985; Morse, 1984). Chowning's (1985) Investigation of the Kove (West Britian, Papua New Guinea) found that the mothers who had to leave the village for employment were not confident in the arrangements made for their infants. These women were concerned about the quality of the wet nurse's milk, fearing that it could be contaminated by pregnancy. This fear is an example of a traditional cultural belief which is not lost when the mothers are exposed to the outside world. Policy makers and health care professionals must consider all the variables (cultural, social and economic) before implementing programs to prevent and alleviate the medical and nutritional consequences of infant feeding methods.

Research indicates that changing patterns of infant feeding are the result of multiple variables (Carrier, 1985; Chowning, 1985; Marshall & Marshall, 1970; Nardi, 1985; Raphael & Davis, 1985). The complexity of factors influencing infant feeding patterns warrants the direct investigation of these variables among the group in question.

Summary

The literature presented has documented the variation of infant feeding practices and beliefs among cultural groups. The sources of the variation are cultural, social, economic and environmental. To fully understand the infant feeding practices and beliefs of a society necessitates documentation of the relevant details of participants' accounts of mores and practices. In addition, observations of participants' actions must be compared with participants' accounts (Schieffelin, 1985).

This study was an initial factor-searching (Diers, 1979) investigation of underlying cultural phenomena. The study was designed to investigate the northern Alberta Woodlands Cree experience of infant feeding from the perspective of the participants themselves. This approach was necessary to minimize biasing the results through a priori assumptions about the experience. In using the "emic" perspective, this study provided a heuristic foundation for this subject area.

III. METHODS

In conducting research, the method employed is determined by the research question and the purpose of the study (Field & Morse, 1985; Leininger, 1985; Morse, 1986; Reichardt & Cook, 1979). The purpose of this study was to gather data about the traditional and current infant feeding practices and beliefs of the northern Alberta Woodlands Cree in the context of their culture. A qualitative method was utilized for this study because it is a sensitive technique which can be used to document, interpret and analyze human behavior, perceptions and experience. This documentation, interpretation and analysis is done within the subject's frame of reference (Field & Morse, 1985; Le Compte & Goetz, 1982; Leininger, 1985; Mead, 1976; Morse, 1986; Reichardt & Cook, 1979).

Diers (1979) has identified this mode of research as the first step of measurement. The purpose of this step is to give names to parts of a situation. Before a situation or event can be measured, the variables must first be identified and labeled. This basic level of inquiry was used for this study because of the dearth of knowledge with respect to the cultural context of northern Alberta Woodlands Cree infant feeding practices and beliefs. This chapter represents a discussion of the methods utilized to identify northern Alberta Woodlands Cree infant feeding practices and beliefs. Included also in this chapter is a description of the measures used to enhance the reliability and validity of the data.

Ethnography

The qualitative research method utilized for this study was ethnography. The ethnographic approach employs participant observation and unstructured interviewing (Field & Morse, 1985, Raggucci, 1972; Robertson & Boyle, 1984). The goal of the ethnographer is to understand cultural phenomena from the perspective of the participant

(Field & Morse, 1985; Leininger, 1985; Raggucci, 1972; Robertson & Boyle, 1984).

Data Collection

Unstructured Interviewing

Raggucci (1972) describes the ethnographer as a major instrument for data collection. In this study, data were collected from detailed observations recorded as field notes and tape- recorded unstructured interviews. These interviews were guided by broad descriptive open-ended questions (i.e., Tell me about how you learned to feed a baby . . .) The interviews were conducted to obtain information on the present and past infant feeding practices and beliefs, from the subject's perspective. The foci of the interviews concentrated on such issues as the method by which a mother learned to feed an infant, her perceptions of support received, as well as patterns of feeding and beliefs regarding infant feeding practices and care. Participants were eager to talk about infant feeding and care. In addition to providing information about infant feeding, informants volunteered their knowledge about the practices and beliefs surrounding menstruation and phenomena surrounding the prenatal, intrapartal and postpartal periods of childbearing.

As an informant answered broad descriptive questions, her answer was used to discover other culturally relevant questions. This approach permitted the informant to control largely the direction of the interview, thereby giving expression to issues of particular importance to her/him. Frequent clarification was sought during the interview to ensure "shared meaning" (Spradley, 1979) between the researcher and participant.

Participant Observation

Participant observation was employed in this study. The investigator observed northern Alberta Woodlands Cree in community setting and their homes during unstructured interviews. These observations were recorded as field notes and analyzed daily. Field notes, in turn, were helpful in guiding subsequent interviews. Robertson and

Boyle (1984) have well stated that a "reflexive process evolves between interviews and observations so that each will tend to suggest additional points of emphasis to the ethnographer"(p.45).

When interviewing women in their homes the researcher was able to observe infant feeding practices. For example one mother was observed feeding a one-year-old infant a mixture of solids. This observation prompted the researcher to ask if solids were initially introduced as mixtures or individually. Additionally, the researcher observed mothers preparing bottles for their infants.

At the community health centre the researcher was able to observe mothers breastfeeding while waiting to be seen by a nurse. Additionally, observations enabled the researcher to determine if mothers did indeed practice the feeding methods they reported they did.

Sample

Sample selection

Prior to selecting the sample, the researcher and the prospective interpreter met with the chief of the governing body of status Woodlands Cree in the community to be studied. The purpose of the meeting was to discuss the study with the chief and obtain the Band's written sanction to approach band members and seek members' approval to be interviewed (see appendix A). The chief was supportive and interested in the study and gave verbal approval immediately. After granting permission for the study, the chief began spontaneously to tell the researcher about the practices used for feeding his youngest child.

In selecting study informants, non-probability sampling was deemed to be the most appropriate method for this research because the research was concerned with meaning rather than distribution or relationships between variables (Morse, 1986). The nominated or snowball method was the type of non-probability sampling used for this study. With nominated sampling, the researcher selected the initial informant. After interviewing this informant, the researcher was referred to other informants by the initial informant (Field & Morse, 1985).

As the researcher had worked for two-and-a-half years (1982 to 1985) among the population to be studied, she had become familiar with the setting and knew the residents. The researcher was in contact with three Woodlands Cree women (of different generations) from the study's setting, who agreed to be informants. These women proceeded to refer the researcher to other potential informants in the community.

In order to investigate traditional infant feeding practices and beliefs, traditional Woodlands Cree birth attendants and elderly multigravidas were interviewed. Traditional birth attendants were identified by asking informants and community members (who did not have hospital births) the identity of individuals who had delivered their babies. A historical account of nursing services in Desmarais, revealed that nurses did not play a large role in the delivery of infants until the late 1940's and early 1950's (Neander, 1986). In addition, many residents of Desmarais spoke of being born in the "bush" as opposed to the hospital. Present-day Woodlands Cree mothers were interviewed with a mind to investigate current infant feeding practices and beliefs.

Informants were approached individually about participating in the study. Once informed consent (seee appendix B) was obtained, the informants were interviewed individually. Group interviews of three women representing different generations were assayed on four separate occasions. A characteristic of these group interviews was that younger informants participated minimally. Instead, younger informants would ask questions of and listen to the older informants. When these same younger informants were interviewed individually, they spoke freely, originally, and even, at times, clarified remarks which older informants had communicated during a group interview. Significantly, certain informants requested not to be interviewed in a group as they felt uncomfortable in a group. For this group of women group interviews were not the most productive technique for collecting data.

Twenty-five women and two men were interviewed. Both men were husbands of informants. In both cases, the husband felt free to include his own observations while his wife was being interviewed. Interviews lasted from 45 minutes to two-and-a-half hours. The interviews were conducted in English or Cree depending on the informant's ability with English. A local interpreter was used for informants who preferred to speak in Cree. Informants were interviewed at least once and, on occasion, as many as three times. The number of interviews conducted with informants was contingent upon the information received in the previous interview. Moreover, the informant's consent to be further interviewed further had to be secured. For example, three informants were unable to partake in second and third interviews for health reasons and, in another example, two informants stated they had no more information to offer.

Sample size

Sampling and data collection ceases when "the theory is complete, does not have gaps. makes sense and has been confirmed" (Morse, 1986, p. 184). The purpose of qualitative research is to understand and describe human phenomena (Morse, 1986; Omery, 1983). This study was not conducted with the intent to generalize its findings to other situations. Rather, the intent of this research was to develop a culturally specific understanding of the context in which infant feeding practices among the northern Alberta Woodlands Cree are conducted. Therefore, the researcher continued to seek and interview informants until the data became sensibly consistent and free of gaps.

To verify the emerging patterns, the researcher interviewed secondary informants. The secondary informants were Woodlands Cree elderly multigravidas and present-day mothers. In selecting secondary informants, the researcher approached women who were unrelated to, and had little contact with the primary informants.

Setting

This research was conducted in Desmarais, Wabasca and Sandy Lake, Alberta and surrounding areas from December 1986 to May 1987. Desmarais, Alberta (see appendix C) and its surrounding area constitute a semi-isolated Woodlands Cree community (approximately 450 km. northeast of Edmonton). The Oblate missionaries of the Roman Catholic Church were the earliest recorded Caucasians to reach Desmarais. The missionaries first contact with the Woodlands Cree in the area occurred in 1895 (Neander, 1986). At that time, the inhabitants pursued a nomadic existence in small family groupings, a lifestyle which can be observed currently in reduced form.

A relatively sedentary lifestyle was adopted with the establishment of the Hudson's Bay Company store and the Anglican and Roman Catholic churches at the turn of the twentieth century (Neander,1986). Since that time, the residents have never been nominally in command of their community which has been and continues to be administered by external agents (church and government). Consequently, although the settlement has the appearance of a community, it may be described more accurately as a conglomeration of small family groups in a defined locale.

Presently, the population of Desmarais and surrounding settlements is approximately 3500. Approximately 90 babies are born a year to local residents (Rasenberg, 1987). The community health centre which is staffed by registered nurses and local paraprofessionals includes an outpatient clinic, emergency room and public health clinic. Physicians are flown into the community five days per week to provide outpatient services. The major sources of employment for local residents are seasonal, for instance, fire fighting in the summer and logging in the winter.

Data Analysis

Data analysis was conducted concurrently with data collection. The ethnographic approach stipulates sequential data collection in order to characterize a situation and provide an in-depth descriptive analysis of cultural phenomena (Robertson & Boyle, 1984, Spradley, 1979 and Spradley, 1980). As has been stated previously, observations were recorded as field notes and analyzed daily. The unstructured interviews were transcribed verbatim. The interviews were subsequently analyzed for content (Bogden & Taylor, 1975; Fox,1976). For example, questions which were specific to infant feeding, "How did you learn to feed a baby?" and "How did you feed your baby?" were analyzed for recurrent themes, phrases and patterns. Following content analysis, the transcripts were photocopied, cut-up and categorized. Initially, the data were placed in broad categories (without overlapping) and coded. As more data accumulated in each category, the broad categories were divided into smaller categories (Field & Morse, 1985).

An advantage of ethnographic methodology is the opportunity to recognize problem areas and correct oversights during the data collection phase (Robertson & Boyle, 1984). As an illustration of the correcting process, group interviews did not yield the same information as one-on-one interviews. In response, the researcher focused more intensely on individual interviews while continuing group interviews, when possible. An additional feature of concurrent data gathering and analysis was that it allowed for the validation or negation of existing categories (Field &Morse, 1985). Data collection terminated when saturation occurred and analysis confirmed the emergent patterns and categories. Saturation occurred when no new categories or patterns emerged from the new data (Field & Morse, 1985; Bogdan & Taylor, 1975; Glaser, 1978). To confirm the emergent patterns and categories, secondary informants were used and negative cases sought out (Field &

Morse, 1985).

Reliability and Validity

The quality of a study and its findings are determined by the reliability and validity of the study. In quantitative research, the emphasis is on the instruments which generate data. Conversely, the focus of qualitative research is on the accurate representation of the situation under study (Le Compte & Goetz, 1982).

Reliability

Reliability of a study refers to the replicability and consistency of the research (Le Compte & Goetz, 1982 and Diers, 1979). Since the ethnographic approach utilizes individualistic techniques for collecting data, it is difficult to establish reliability (Robertson & Boyle, 1984). However, LeCompte and Goetz (1982) aver that "delineation of the physical, social and interpersonal contexts within which data are gathered enhances the replicability of ethnographic studies (p. 39)." Thus, the replicability of the results refers to the agreement of the descriptions of Woodlands Cree infant feeding practices and beliefs by other observers. To increase the reliability of the study the researcher used the following strategies. First, the investigator kept field notes of the informants' settings, activities and behaviors. Second, tape recordings and transcriptions of the interviews enhanced the reliability of the results because infant feeding practices and beliefs could be confirmed by other researchers. Excerpts of verbatim accounts and case studies can be found in the "Findings" chapters and serve to substantiate the analysis. Third, secondary informants reinforced the reliability of the results by verifying emerging categories and patterns (Glaser, 1978 and Morse,1986). Finally, this thesis includes details of the study setting, informants and methods used to obtain informants as a means of ensuring an accurate description of the participants and their community.

Validity

A unique characteristic of the ethnographic approach is the intensive and descriptive data collection which occurs in the natural setting of the culture to be studied (Robertson & Boyle, 1984). It is this unique method of data collection which contributes to the validity of ethnographic research (Robertson & Boyle, 1984 ; LeCompte & Goetz, 1982 and Pelto & Pelto, 1970). Other factors contributing to the validity of the study include: the inductive approach of the unstructured interview (Morse, 1986) and participants responses in their own words. From these answers, the researcher was able to confirm the informant's meaning by probing responses. Probing allowed informants to clarify responses which, otherwise, might have remained vague and/or ambiguous.

To ensure the validity of interviews which required translation, the researcher prepared the interview questions with the interpreter prior to each interview. The researcher explained to the interpreter the importance of verbatim translation. As a further precaution, the researcher explained the rationale behind each question to the translator. Furthermore, following a review of the interview, the researcher discussed interpretations of the interviews with the translator as well as any information which she did not understand. The translator developed such a keen understanding of the study that she would ask the researcher if the researcher wished to pose a question which had been asked in a prior interview. The translator's purpose in reminding the researcher of a previously asked question was to ascertain whether or not the researcher had forgotten to ask a particular question. In addition, the translator reviewed all tapes of translated interviews to ensure that she had provided, indeed, verbatim translations.

The preservation of raw data, by tape-recording interviews, was another measure used to enhance validity. Interviews were transcribed verbatim for content analysis. Content analysis of the interviews contributed to the validity of the results because responses were carefully analyzed for meaning. Since each section of the interview was read circumspectly and analyzed, the inductive method of analysis has "high validity" (Field & Morse, 1985 p. 103). Content analysis involved the coding of significant words, phrases, themes and concepts of each interview in order to categorize them with similar information from other interviews. Cross-comparison of interviews was then possible in order to group similar data and to create new categories when needed.

Sampling methods also contributed to the validity of the results. The selection of the sample was deliberate in order to obtain Woodlands Cree women who were knowledgeable about infant feeding practices and beliefs. These women were considered experts on the subject as they were able to describe their experiences in detail, and were able further to reflect on them. The addition to the sample of secondary informants was a measure to determine whether or not the emerging patterns and categories were comprehensible and whether or not patterns and categories were congruent with the secondary informants' comprehension of infant feeding practices and beliefs.

The researcher's past experience in the study setting (residence in the community for two and a half years as a health centre nurse) contributed to the validity of the research (Field & Morse, 1985). The informants knew the researcher and many had contact with her during her visits to the community, following her enrollment in graduate school. Consequently, the researcher's presence in the community was not an unaccustomed circumstance to the residents. Many residents, upon seeing the researcher in the community, commented "It's nice to have you back". Prior to initiating data collection, the researcher visited the community on various occasions to discuss the study and obtain a sense of community members' interest in the research. As a result, participants had expected the researcher to return for the purpose of conducting the study.

Finally, the comparison of interview data with field notes strengthened the validity of the study (Field & Morse, 1985). Comparing field notes and interview data enabled the researcher to discern whether or not informants' testimony was, in fact, in conformity with their practices.

Threats to Validity

Threats to the validity of the results included several factors. As the researcher was a nurse in the community, informants may have been reluctant to provide information which criticized nurses or the advice and support given by nursing personnel. On the other hand, informants may have selected information which they felt nurses wanted to hear.

Another threat to validity concerned the possibility that informants may have chosen not to mention certain infant feeding practices which could be considered socially unacceptable. Such a withholding of information may have occurred plausibly for fear that the researcher's allegiance to confidentiality would not apply to socially unacceptable reports of childrearing practices.

Ethical Considerations

Following the approval of this research by the University of Alberta Faculty of Nursing Ethics Committee, the researcher met with the chief of the Indian Band in the community. At this meeting, the researcher gave the chief a letter asking for permission to interview band members and explained the research to him. (see appendix A). Permission was granted by the chief before informants were approached about participating in the study.

Additionally, informed consent (see appendix B) was obtained from the informants prior to interviewing. Informants were told that participation in the study was voluntary and that they may withdraw at any time. Informants were also told that they might refuse to answer any questions during the interviews. Informants were also assured that all interviews and observations would be kept confidential.

If the informants sought advice with respect to infant feeding, they were referred to a public health nurse. No reports or observations of harmful feeding practices were disclosed. Had such a report been received, the appropriate authorities would have been notified (i.e., the Indian Band's Social Services).

IV. TRADITIONAL PRACTICES

In this chapter, the traditional infant feeding practices and beliefs of the northern Alberta Woodlands Cree are presented. Other major findings which appear in this chapter include the cultural context of childbearing, reports of relactation and patterns of weaning. In addition, older multigravidas' and traditional birth attendants' perceptions of "What makes a baby healthy?" and "insufficient milk syndrome" are portrayed.

Characteristics of Participants

Of the 25 women interviewed, 13 were over the age of 55 years. The information presented in this chapter pertains to the accounts of informants between the ages 55 to 95 years. In addition, data obtained from the spouse (age 98) of the 95-year-old informant is included. This particular age range was selected by this researcher to identify traditional infant feeding practices and beliefs because the first graduate nurse (a Sister of Providence) for the community arrive in 1929 and the first permanent hospital with running water was completed in 1934. Additionally, the journals of the Sisters of Providence (who provided initial westernized health care services to the community) indicated that they did not play a role in childbirth until 1940 (Neander, 1986). Therefore, these informants had not been as greatly exposed to westernized practices during their formative and childbearing years as had women under the age of 55 years.

Each one of these informants had given birth to a minimum of three children. The maximum number of children born of an informant was 16. The majority of their births occurred at home in traditional fashion. Of those who had hospital births, it was only their younger children who were born in the hospital, with the exception of one 57-year-old who had delivered all six children in the hospital. The following chapter documents the information obtained from informants over the age of 55 years.

Table 1: Characteristics of Traditional Participants

Informant	*Age (years)*	*Number of Children*
1	95	9
2	87	16
3	83	13
4	77	9
5	75	7
6	70	10
7	70	6
8	67	9
9	63	3
10	60	13
11	60	10
12	57	6
13	55	9

The Cultural Context of Childbearing

Childbearing is a cherished event for the Woodlands Cree mother. Several traditional cultural practices and beliefs supported and promoted healthy childbearing. The gravid female's mother was the teacher and support person throughout the woman's pregnancy, childbirth and post-partal period. Therefore, psychological and emotional support was readily available for mothers.

During the prenatal period many cultural prescriptions were practiced to ensure a healthy pregnancy. Avoidance of heavy lifting (especially during the first trimester) to prevent miscarriage and good nutrition were practiced throughout pregnancy. Additionally, alcohol and tobacco were forbidden during pregnancy; elders informed pregnant women that their infants would be jaundiced if they indulged. Breastfeeding during pregnancy was not encouraged, although some women did breastfeed while pregnant.

Exercise was encouraged prenatally to ease labour and delivery. Gravid women were also instructed not to sleep excessively during second and third trimesters for fear that their baby would be too large and result in a difficult delivery. Woodlands Cree also believed that a reclining pregnant woman should sit up before changing from one side to the other, in order to prevent the umbilical cord from wrapping around the fetus' neck. These beliefs and practices served to ensure a safe pregnancy and birth during a time when these people lived in relative isolation in harsh environmental conditions.

Additionally, Woodlands Cree believed in maternal impression. A pregnant woman was instructed not to pay too much attention to animals for fear the infant would acquire the physical characteristics of the animal. The pregnant woman's behavior was also considered to influence an unborn child. A mother who was reported to have fought with others during her pregnancy gave birth to a child who became a bully. Similarly, a women who observed the slaughter of a cow and fainted during pregnancy gave birth to a child with fainting spells. This child was reported to have outgrown his fainting spells with the assistance of a herbal mixture taken orally. And finally, if the gravid female spoke negatively of another individual her child could be born with a physical deformity. These beliefs and practices were perceived to ensure a safe pregnancy and birth during a time when these people lived in relative isolation in harsh environmental conditions.

Traditional birth attendants conducted deliveries and provided care post-partally, but not prenatally. Distances were great and modes and routes of travel were limited, therefore, prenatal visits were not practical. In anticipation of labour and delivery, the pregnant female was prepared for childbirth and infant feeding by her mother. This preparation was reinforced by the birth attendants during labour and delivery and the post-partal period. Due to distances and nomadic lifestyles, deliveries were also facilitated by husbands, mothers and fathers of the gravid female. The researcher received one report of a brother and sister-in-law delivering a baby, prior to the birth of their own children.

When labour and delivery was attended by two traditional birth attendants, one cared for the mother and the other for the neonate. The labouring woman often delivered in a squatting position while holding on to a pole secured diagonally across the room. A birth attendant supported her back (see appendix D). If the woman did not find the squatting position comfortable, she was allowed to deliver in the position of her choice. Two Informants who did not use the squatting position for delivery, reported giving birth in a seated position on a bed. Disposal of the placenta was facilitated through burning it or burying it in the bush. After delivery, the mother was bathed, put to bed (where she would remain from four to seven days) and given a herbal drink to stop the bleeding as well as to aid in the production of breast milk and to regain her strength.

One birth attendant looked after the neonate preceding delivery, as was stated previously. The umbilical cord was cut and the mucous removed by sucking through the infant's nose or by placing a finger down the throat causing regurgitation. When the baby was considered stable ("breathing well"), he or she was washed and wrapped in a moss bag (see appendix E) and conscientiously watched for two or three days. There were no reported taboos about touching the newborn infant for fear of uncleanliness. The addition of a baby to a Woodlands Cree community was attended by such appreciation and love by the community's members that non-touching would have been unthinkable. The value of the neonate to the Woodlands Cree is evident in the following quotation.

> No, there's no belief that the child is unclean in that way. They would take good care of them right from when the baby was born, and once they knew that the baby was on the safe side, like especially after they got the baby breathing, then their process was to just take care of it as well as possible. Two or three nights, there'd be women up, sitting up with the baby, because of the fear that the baby might choke again, like in case the mucous wasn't quite out. So nobody would go to sleep--that's what we used to do anyway [70-year-old].

Naming of an infant occurred during the first month of life. Infants were named after animals or the elements (wind, sun, etc.), as it was believed that they would protect the child as he or she grew.

As with the neonate, the mother was also carefully looked after, following birth. For one month post-partum, a new mother stayed with her mother and was relieved of household chores, for the purpose of enabling her to rebuild her strength and establish lactation. This post-partum practice provided an opportunity for a mother to teach and reinforce infant feeding practices and beliefs to her daughter. After leaving her mother's residence, the new mother (and infant) received support and assistance from her mother and other experienced mothers. Despite the lack of material resources, the new mother and child were provided with the best possible human support at the time.

Post-partum taboos for women included abstinence from intercourse and not attending any sacred ceremonies or sweatlodges, while bleeding. Husbands were reported to have waited one month post-partally before sleeping in the same bed as their wives and resuming hunting.

Traditional childbearing practices and beliefs of the Woodlands Cree facilitated the survival of their people. Abstinence from breast feeding when pregnant and relinquishment of household chores immediately post-partum promoted the physiological well-being of the mother and infant. In addition, the psychological well-being of the mother was promoted by means of preparation for childbirth and support received post-partally.

Breastfeeding

The value of breastfeeding to the Woodlands Cree is reflected in the many beliefs and coping mechanisms utilized to maintain lactation. Lactation was facilitated by the practice of a breastfeeding woman staying with her mother for one month after delivery. Additionally, the breastfeeding woman was relieved of all household chores and childcare with the exception of breastfeeding. A herbal mixture was administered to fortify the lactating woman and her milk. Finally, the promotion of good nutrition and fluid intake enhanced lactation.

Cultural beliefs with respect to the loss of breastmilk also served to promote successful lactation. It was believed that the lactating woman should keep her breasts and body warm to prevent milk loss or to keep her milk from turning to water. This belief discouraged the breastfeeding mother from becoming chilled and ill. This practice was perhaps a means for survival during times of harsh weather and heavy workload when human milk was the main source of nutrition for an infant:

> I think that the reason I didn't have milk when that child was born, four days later I was left all alone and I was out of bed, and I went and washed clothes. And I think that I caught a cold from the water and my breasts got cold . . . In those days--in my days--the women used to stay in bed for [a minimum of] four days and then they would get up and start to do the work [70-year-old].
>
> Because your milk will stop, that's what my mother and grannies used to tell me. You have to keep your--especially your breasts warm, and your feet. Because you get chilled and then your milk will stop, you'll have nothing to--no milk to breastfeed your babies [55-year-old].

One belief cautioned against high levels of activity when breastfeeding while another belief advocated nursing the baby regularly to prevent cessation of lactation. The following excerpts illustrate these beliefs.

> I breastfeed [*sic*] as much as possible and when the babies cry, then that keeps the milk flowing. But as soon as you don't breastfeed your kid regularly, then you're bound to lose your milk [95-year-old].
>
> And then I asked my mother-in-law how come she (the infant) doesn't want my breasts anymore and she said, you don't have the rest anymore and your milk is no good. She said your milk doesn't taste right to her. . . [60-year-old].

There were no traditional cultural proscriptions for the lactating female with respect to entering a sweatlodge. Breastmilk, unlike menstrual blood, was believed to be a clean substance. Therefore, lactating women were able to participate in sacred ceremonies and attend sweatlodges.

Initiation of Breastfeeding

Woodlands Cree practiced withholding the infant from the breast for two to four days until lactation was established as they believed the colostrum is a watery milk and "no good" for the baby. Good milk is considered to be white in color and "not sticky like cream". Informants stated they knew the colostrum was not good because it appeared "watery and light in color". Determination of good breast milk was done by the appearance rather than by the taste of the milk. Informants referred to testing their breastmilk by expressing it and looking at it.

> And the reason we knew--we thought the milk wasn't good, was when it was watery, is it didn't look like milk . . . [67-year-old].

There were no taboos about tasting breastmilk and one informant reported tasting in order to decide what substance to feed her infant initially.

> I waited a few days before I started breastfeeding the child because I didn't have any milk and it's true that the--it was water, and it would drip from by breasts. So what I used to give the baby was water and sugar to help him get by, and then eventually I started working him to take the breast, and eventually I did get milk and that put him on the breast . . . and the reason I used the water and the sugar was, I tested myself, my breastmilk one time, and I tasted it to see how it would taste. And it tastes sugary, and that's why I knew from there that I should put a little sugar in the water [70-year-old].

There were two beliefs expressed about what this "watery milk" would do to the baby. Some believed it would "not fill the baby up" and others said "it would bother the baby's stomach."

Although all elderly multigravidas agreed that the practice was to withhold the breast immediately post partum, not all informants withheld it for the full two to four days. Instead, these women initiated breastfeeding within twenty-four hours after delivery.

Prior to the initiation of breastfeeding the colostrum was manually expressed or "sucked out" by an older child and discarded in a clean place. Informants indicated that breastmilk, according to belief, should be discarded in a clean place, "not in the slop pail or garbage".

> I used to --the reason we used to do that is, I used to have other kids, maybe like suck on the tit and then spit it out, and the reason we knew--we thought the milk wasn't good, was when it was watery, is it didn't look like milk . . . [67-year-old].

> If you just throw the milk anywhere, you won't have any milk to--your milk will stop and you won't have any milk to feed your baby. [Why does a woman lose her milk if she throws it in a toilet?] Because that means they just--you--know she plays with her milk. She doesn't give it to her baby. That's what my mum used to, and granny used to tell me. Because God gave us to--these things, breasts, to feed our babies with to have in them and feed our babies from there [55-year-old].

Failure to discard breastmilk properly would result in the cessation of lactation. In addition, the lactating female should exercise caution that her milk not leak and fall on the floor or a dirty area as this would also cause her to lose her milk.

> I have heard that, that that's happened, that the milk shouldn't drop on the floor, especially in a dirty place or let it drip along the body. And eventually the women did lose their milk [77-year-old].

To prevent breastmilk from leaking on their bodies or the floor informants reported wrapping flannelette or other cloth around their breasts.

For the first few days following birth, the infant was fed by one of four ways. The traditional prelacteal feeds included the following: water or glucose water by spoon, sugar wrapped in a wet cloth to suck on, a broth made from meat, or milk from a lactating woman (usually from a relative, but not always). The most common practices were for a lactating female to nurse the infant or to give the baby glucose water.

> I used to breastfeed them. But when I had my babies, four days I waited before I breastfed them myself, but I had a sister, . . . , who's passed away now, who used to breastfeed for me until my milk was good. It used to be sort of a light milk, or , you know, sort of watery milk. Back and forth we would do that the same, if . . . , would have her baby, then . . . , would wait the four days, and then I would breastfeed the babies--like back and forth like that . . . [67-year-old].

The importance of withholding the infant from the breast initially was reiterated when informants were asked if there was anything they thought a nurse should understand about feeding a baby. A 95-year-old informant's reply was:

> With the breastfeeding that you wait--wait for a couple of nights and let the milk go good.

Demand Feeding

Woodlands Cree mothers fed their infants whenever they desired and allowed them to nurse until they were satisfied. Informants reported that they knew that their babies were satisfied because they would sleep peacefully. After nursing their infants, informants wrapped them tightly in a moss bag or blanket and placed them in an Indian swing (see appendix G). The wrapping and swinging of the infants insured that they would sleep soundly.

Milk production is a function of the infant's demand. The amount produced is contingent on the amount the infant desires (Jelliffe & Jelliffe,1977). The elderly multigravidas and traditional birth attendants articulated knowledge of the need to breastfeed frequently to stimulate milk production. For example, these women were perplexed by the questions "How often do you nurse a baby?" and "For how long do you nurse a baby?". When it was explained to informants that present day health professionals gave mothers advice on how to time breastfeeds, they laughed or stated "maybe that is why these young mothers are losing their milk."

Care and Diet of the Lactating Woman

The main cultural prescriptions for the lactating woman were to keep the breasts warm and not be "too active (be sure and rest)." If these prescriptions were not followed, the woman would lose her milk. The lactating female kept a cloth around her breasts to keep them warm and avoided contact with cold water. Additionally, when breastfeeding, the woman covered her head and feet snugly when she went out in cold weather. The covering of the head and feet was extremely important as informants reported that cold enters the body through these body parts. These practices served to conserve a lactating woman's energy and protect her from illness associated with chilling.

Reports of mastitis were disclosed by two informants. Treatments consisted of an Indian medicine which the woman drank and spruce gum was used as a poultice on the breast over the infected area. Sore and cracked nipples were also regarded as a problem. To alleviate the pain and to promote healing of the nipples, bear grease or lard was massaged directly on the nipples. Some informants reported that they abstained from breastfeeding while their nipples healed, whereas others stated that they continued to nurse.

Traditional dietary practices for breastfeeding mothers demonstrate a strong knowledge of the relationship between maternal nutrition and lactation. Informants stated that a woman's diet determined the quality and quantity of breastmilk. Soup, fish, meat, berries and vegetables were identified as foods contributing to good breastmilk. Consuming a large quantity of fluids was also cited as important for breastmilk. Onions, alcohol and "gassy" foods (i.e., turnips, cabbage) were avoided when breastfeeding as they were believed to upset the baby. In addition, community coercion to withhold alcohol from the lactating woman was practiced. Alcohol was believed to make "the milk go bad and the baby would become sick".

As human milk was believed to be made from the foods which were eaten, diet was an important consideration for the breastfeeding mother. Foods that were nutritious for the mother were considered to be good for the baby. The oldest female informant, 95-years-old, reported that:

> if you eat well, and if you eat anything that doesn't bother you, it still makes good

milk--that's my belief.

In summary, care and diet prescriptions promoted successful lactation. These prescriptions guarded against illness due to chilling and helped conserve and supply energy through rest and nutrition.

Breastfeeding as a Contraceptive

All elderly multigravidas reported that a breastfeeding woman did not become pregnant as quickly as a woman who bottlefed. Although these informants agreed that breastfeeding had a contraceptive effect, their perceptions varied as to the causation of the contraceptive effect. All informants identified the absence of menstruation while lactating as the basis for not conceiving. Most informants did not venture an explanation in response to questioning about amenorrhea during lactation. It was believed that once menses resumed, conception would occur. The other reasons disclosed were; "the blood is being sucked up by the child;" "you didn't have any time for your husband"; when you stop breastfeeding, you lose a child so you become pregnant to replace that loss; and that you are still "bearing the child from your body" when breastfeeding. The following excerpts illustrate informants' beliefs with respect to breastfeeding and conception.

> Yes, it's true that the woman that breastfeeds don't[*sic*] get pregnant right away. I think it's because when you're nursing, the blood[menstrual blood] is also being sucked up by the child, because that's where the child gets life is through the blood and the suckling of the milk [70-year-old].

> And when you breastfeed your child you still have him in your body like, it's still working in your body, because you're giving him life from your body and he lives on you [70-year-old].

> What I've heard--I don't know why that happens--is that women who were breastfeeding didn't get pregnant, but those that weren't breastfeeding got pregnant almost right away . . . It's sort of like you've lost a child once you stop breastfeeding--you've lost a child, and then you get pregnant again. It sort of replaces that [67-year-old].

No cultural proscriptions were reported regarding intercourse during lactation. However, informants disclosed that they always abstained from intercourse when either bleeding post-partally or menstruating. Informants also stated that they did not sleep with their husbands post-partally because their husbands were often out in the "bush" hunting.

Wet Nursing

As stated, wet nursing was practiced following birth for a period of up to four days. In addition, wet nursing was practiced in the event of the mother's death or illness. Informants reported that an ill or weak woman was encouraged not to breastfeed her baby to enable her to regain her strength. A fourth reason for wet nursing was also disclosed. A baby who cried unceasingly was taken to a lactating female to be nursed. It was believed that if the infant was crying continually, the mother's milk had turned to a "watery milk" because, as previously mentioned, she had not kept her breasts warm. This "watery milk" either did not satisfy the baby's demand or alternately, gave the infant a stomachache.

A special relationship developed between the wet nurse and the infant she fed. Informants who wet nursed recalled that they wanted to keep the infant and not return him or her to the biological mother. Despite their emotional attachment, they reported that they never rejected the belief that the wet nursed infant always belonged to the biological mother. Similarly, a special bond was created between the two infants nursed by the same woman. Informants spoke of the son or daughter of their wet nurse as their own brother or sister. The preceding quotation illustrates the special bond between a woman and the babies she wet nursed.

> Yeah, you grow to love the babies, even for the short time that you're breastfeeding them. Just like your children, only you're not living with them [67-year-old].

Bottles and other Milks for Infants

Although traditional informants favored human milk as the only milk to be used for feeding infants, the researcher received reports from two women of other milks being fed to infants. The most common non-human milk given to babies was fresh cow milk. Cow milk was boiled prior to feeding it to an infant. Infants were given cow milk by spoon or cup beginning at six months to one year of age. Cow milk was given commonly during the process of weaning an infant from the breast.

> As far as I knew, most women did breastfeed their kids till they're one, with one instance of a child that came to me from one of my daughters. My daughter was breastfeeding the child and he was six months old when my daughter gave him to me. And from the time I got the child, I fed him solid food--I just started feeding him that because I couldn't breastfeed him. I never tried him on the bottle, and the way I used to give him milk was on a spoon, and usually I would warm the milk up a bit. I used to have cows, so I used to give him the milk from the cows [67-year-old].

Two second-hand reports of giving moosemilk to an infant were disclosed. One of the informants mentioned that some people had pet moose and were able to milk them as one would milk a cow. When other informants were asked about this practice, they stated they had no knowledge of it and suggested it could have occurred only in the bush and as a last resort.

The use of processed non-human milk for infants in Desmarais has its origin in the recent past. Commercial development of tinned evaporated milk (which could be easily transported and required no refrigeration) made importation of animal milk into isolated areas feasible. The earliest accounts of the use of evaporated milk for infants placed its introduction in the 1940's. The evaporated milk was diluted 50:50 with water before feeding it to an infant. At this time synthetic nipples were also available, but few baby bottles. Instead, the practice was to use any handy bottle and stretch a nipple over it (see Appendix F). Prior to 1940, an 87-year-old informant disclosed a case of a grandmother using the teat of a moose stretched over a bottle to feed her grandchild whose mother had died. In this case, milk was not used, rather, the liquid from boiling rolled oats was placed in the bottle.

> I do remember an old lady who took care of her grandchild when the mother died. She took the tit of a moose and put that over the bottle and she put rolled oats in it and this is what the baby sucked she boiled the rolled oats right to liquid so that the baby could suck it, like a syrup.

In one exceptional account, an informant reported the existence of a baby bottle in 1919. This bottle was used for an older infant (one year). The informant stated that the bottle had been given to her mother by some missionaries. The bottle had the appearance of a curved neck flask (see Appendix F) and almost no resemblance to a 1980's infant bottle. Otherwise, older informants recounted that bottles did not exist in their days and breastfeeding was the only practice. The preceding excerpts illustrate past practices and beliefs with respect to bottles and other milks for babies.

> Not--and he didn't--never [*sic*] gave us a bottle, ready filled with milk, to give it to the baby as soon as it's born, that's what my grannies and mum used to tell me. You know, God gave you those things to feed your babies from, they (breasts) have milk in them and breastfeed your babies--feed them from there, not from a bottle [55-year-old].

Reports of Re-Initiation of Lactation and Relactation

There was one self-report of re-initiation of lactation. One informant remembered resuming breastfeeding after stopping for one week due to cracked nipples. During this week, this woman applied grease to her nipples and gave the infant evaporated milk. This informant reported no difficulty in re-establishing her milk supply.

Additionally, informants were not in agreement as to whether or not relactation was possible. Those who believed in relactation stated that the sucking of the baby on the breast would stimulate lactation. The others avered that only in proximal and direct relation to childbearing did a woman have milk in her breasts.

Although none of the informants disclosed having practiced relactation (with an infant other than their own), some did remember others (now deceased) who had. The women who practiced relactation supplemented the infants with sugar, oats or flour. The sugar, oats, or flour were wrapped in a cloth which was then dipped in water and given to the infant to suck on. The reports of relactation are found in the following excerpts.

> I have heard of one incident where a grandmother did breastfeed a grandchild and the same thing happened where milk finally did come after the child had been sucking [83-year-old].

> Yeah, I remember that, and I know--but I think that old lady's dead now . . . She had may young girls--she had many girls, you know, all teenagers, and some of them were older and getting married. Then she had one son, only one son. I think

> he was the oldest in the family. And he got married, and her daughter-in-law started to get sick after she had the baby. She was already sick when she had that baby, but after it was born she died. And so the grandmother had to look after the baby. I used to see her breastfeeding it when we used to go to town, because we used to go every summer when my parents were well and alive, that time, my dad and my grandpa. We used to go up there for when we got out for the holidays from school.
> [When she started to breastfeed her grandchild, had she been breastfeeding another baby at the same time?] No. She was all dried up by that time already. [But , she just started to let the baby suck, and--?] Yeah, yeah. I used to see her breastfeeding it. She had some milk--the milk came back when she started breastfeeding the baby, her grandson. [Do you remember how old she was?] Ah, she was old. Already--that time. All her children were all grown up and getting married and having children. She used to say, at first he used to have a real hard time because he was just a little boy, just a baby, when his mum died. But when she started to try and breastfeed it, she said she never had too much money to buy any milk because even the milk costs too much. And she said at times when she never had any money, when she runs out of milk [purchased non-human milk], she said she used to tie a little bit of sugar in a piece of cloth with a little bit of rolled oats or flour, and he used to suck that [55-year-old].

> I remember a lady in Chip Lake [Chipewyan Lake], sometime quite a while ago, where the mother had died--it wasn't her daughter--where the grandmother took the baby and had nursed it from her breast, but at the same time she would also tie a little piece of cloth with some sugar on it and she'd dip it in some water or some fluid and stick [*sic*] in the baby's mouth, because the baby wouldn't stop crying because of the death of her mother and there was no way the grandmother could make the baby stop crying or satisfy the baby so she did everything she could to feed it [60-year-old].

As illustrated, relactation occurred when there were no other means to feed a baby whose mother had died. Otherwise, a deceased mother's baby was wet nursed.

Insufficient Milk Syndrome

Insufficient milk was reported by only one informant. It was believed that this woman's loss of milk was related to a dog being present during the birth of her third child. Unaware of the dog's presence, the woman became severely frightened when the dog ran out from under its hiding place. Prior to this birth, the woman had plenty of breastmilk, but after the aforementioned incident she never regained her milk and had to feed cow milk to her infants. The following excerpt is her account of this experience.

> While I was having my baby, they were getting set up, for me to try and have the baby. I was on the pole already and my mother was there and my husband had gone to get this woman [a traditional birth attendant to assist]. They came in through the door, and we didn't know right away, but a pup--a dog jumped into the

> room, went under the bed and I didn't realize this. And while I was having this baby--I was squatting there, my mother was waiting for the baby to come. As soon as the baby came, this dog shot out from wherever it was hiding and kind of bumped me. And they just about dropped the baby, and the dog went after the baby, we just about lost him . . . it's my belief and it's also the belief of the people that were in that room that reason why I lost my milk was because the dog had interfered. That was the third child, so then of course when I had my other pregnancies I never got any milk [70-year-old].

Aside from this informant's experience, none of the other women disclosed any problems with insufficient milk. On the contrary, these women claimed that in their day, women had plenty of breastmilk. Elderly multigravidas and traditional birth attendants cited the following reasons for insufficient milk: inadequate food intake, insufficient fluid intake and the chilling of the mother's breasts which prompted her milk to turn to water.

Older multigravidas and traditional birth attendants also stated that mothers who did not have enough milk presently, were not breastfeeding frequently and were too active. Additionally, these informants disclosed that present-day mothers wanted to leave their babies with a babysitter, thereby "putting them on a bottle." By giving the infant a bottle, these women were not breastfeeding frequently enough and therefore, losing their milk. Given that insufficient milk was viewed as a problem by younger informants, it will be presented in more detail in the next chapter.

Weaning

Infants were breastfed traditionally for one to four years. The youngest child often was breastfed longer than the others in a family. Informants stated that children were weaned because the mother was pregnant or the child had teeth and was able to eat on his or her own. Participants disclosed that they reasoned with an older child when it was time to wean. The older child was told that he or she was no longer a baby and was too old to breastfeed.

Second hand reports of children being breastfed for longer than four years were also revealed. The preceding quotations are examples of two children who were breastfed for 10 and 12 years.

> Back then a lot of kids breastfed right up until they were very old. One guy that I know, and we used to tease him about it, and he used to make us cry because of that. Where he would just walk in the house and go to his mother and rip her clothes off and then take the tit and start suckling on them [*sic*].[How old was he?]Well, he was about this high [approximately four feet], which would've been . . . maybe about 10 years old, if not more [70-year-old].

> There's one old lady use to come to the Mission when and that girl was in school that time I was in school, every Sunday and every Wednesday they use [*sic*] to come in and see the kids eh. The family use [sic] to come down and then go in the parlour and sat [*sic*] with our parents in there, come down on Wednesday and Sunday, there's one old lady use [*sic*] to come down every Wednesday, every Sunday and that girl she was a tall girl but her mom use [*sic*] to sit way in the corner and sucking away in there [*sic*]. [The girl, the tall girl?] Um hmmm. [So she was pretty old when she was--] Well yes she was still sucking when she was in school. She used to come down every Wednesday to you know give her a suck and Sunday. [So how old do you think she was?] She was around 12 years old. Cause we use [*sic*] to be surprised and we use [*sic*] to see her sucking away when we were sitting with mommy in there the parlour and the other people in there, and her sitting over there in the corner and that girl use [*sic*] to sit with her mom and sucking away [*sic*] [63-year-old].

Elderly multigravidas and traditional birth attendants reported two methods of weaning their infants. Gradual weaning was one of the methods used. Mothers would reduce the number of breastfeedings as the child began to eat solid foods. Infants were offered solids instead of breastmilk. In addition, cows milk was given to babies in place of breastmilk. This process of gradual weaning began when the infants were eight months to one-year-old. Informants were unable to recall the length of time for which gradual weaning was practiced. However, most women reported breastfeeding their baby until two years of age. Participants spoke of getting up with their crying children during the night when they were weaning gradually, and giving them a cup of cow milk or solid foods instead of breastmilk. In addition, informants reported using the Indian swing at night when their infants woke up and wanted to nurse.

Another method used when weaning their infants was minimal breastfeeding (Morse, Harrison & Prowse,1986). Elderly multigravidas and traditional birth attendants stated that babies were only breastfed once or twice a day when they were weaned because they were old enough to eat on their own. Therefore, it was easy for the mother to wean the baby because she was able to distract him or her by offering other foods or something to play with. These mothers declared that they did not have to do anything to their breasts when they terminated breastfeeding. Minimal breasfeeders (Morse,et.al., 1986) reported that the "breastmilk just dried up."

Some informants disclosed that they had to express milk from their breasts when they weaned, due to discomfort. Another practice was to bind their breasts and place peppermint leaves on the nipples to "dry up the milk". Others complained of tossing and turning for two to three nights due to the discomfort in their breasts. After two or three days, their milk would be exhausted. During this two to three day period, women would restrict their fluid intake to decrease breastmilk production.

Although, none of the women interviewed reported using harsh methods to wean their infants, they mentioned hearing about such methods. Informants stated that they had heard of mothers who would place the ashes from a pipe on their nipples to get the infant to wean. Participants stated that they felt this practice was very cruel and therefore, were not prepared to subject their infants to it. Informants feared there might have been psychological ramifications for a child had they used harsh methods of weaning. Instead, they gradually weaned their infants and reasoned with them during the process.

Introduction of Solids

As stated previously, all women breastfed traditionally for one to four years. Although breastfeeding was the normative practice, the introduction of other foods occurred early in life. Often newborns were given soup broth at birth in response to the belief that the first milk in the breast was too watery and unfit for the baby. A 95-year-old informant described this meat based soup in the following account:

> Meat. But they also put a little bit of oil in it to make it, you know, like slick--put a little grease in it so that when the baby drinks it, it goes down easier for them. One of the other reasons is grease in the soups helps the child have a bowel movement.

> And the reason for that is a lot of the times the mucous is still in the child and it's settled in the stomach and they have difficulty going to the bathroom, so it loosens that up, helps them go a little bit better.

Informants responded that solids were introduced to infants between the ages of two months and one year. As stated, soup or broth was the initial food given to infants. This broth was made from fish or meat. Fish was considered to be the best food initially for an infant because it was "nice and soft." Other first foods given to infants varied depending on the locale in which their families lived as well as depending on the degree to which their life was sedentary. For example, those families who pursued a nomadic lifestyle fed their infants wild meats and fish, whereas families with a sedentary lifestyle had cows and large gardens which permitted them to give their infants a more varied diet (i.e., potatoes, turnips, cabbage, beets, carrots and cows milk).

The following quotation illustrates how an informant (now 70-years-old), with a sedentary lifestyle fed her younger siblings at three to four months.

> . . . and as I was saying, that fish and meat was the important part of the food that we have, but we also had cows. And this is another thing: I used to boil the milk, the fresh milk; boil it and put bread in there, and that comes just like soup too. And that's what I gave . Many things like that--like eggs, you can do many things with eggs, like scrambled eggs. And the baby easily [*sic*] swallow that. But as long as you don't feed the baby with something solid--they might choke on it. They don't really know how to do it right away, to swallow something solid.

Informants made a point of telling the researcher that they survived on what was available. Informants admitted proudly that they did not use any baby foods but always fed the babies "from the table " or that the babies were offered" what we ate."

> Like some of them say that they buy baby food from the store to feed them. But for myself, we used to feed them right from the table, like what we eat. It seems that it makes them more [*sic*] stronger. And then they never used to be sick, either. Never had to bring anybody to the hospital to stay when he was a baby [55-year-old].

Furthermore, informants referred to table foods as an asset to the development of stronger babies. In particular, it was believed that carrots promoted the growth of strong teeth.

> . . . they used to have carrots cause they said it makes your teeth strong and all that and also my mom used to say too they used to boil some potatoes and make some juice out of it and we eat that when we were small cause there's no [*sic*] nothing , there was no baby food [57-year-old].

Premastication

Caution was always used when feeding an infant solid foods. Foods were either mashed or premasticated prior to giving them to an infant. To prevent an infant from choking, premastication of solids (meat in particular) by the mother was practiced. Premastication was practiced until infants had a full set of teeth and were chewing well. The preceding example illustrates the practice of premastication by a 95-year-old informant.

> I used to feed them starting with soup, and then eventually solid foods after that. I used to chew their own food too and feed them like that because they couldn't chew their own.

All the informants aged 50 years and older agreed that premastication was a common practice during their childrearing years. Three (of a total of 16) of these informants did not practice premastication, rather they cut solids up finely and fed their infants broth made from fish or meat. A 55-year-old informant who did not practice premastication stated:

> I used to make a lot of soup and feed them. Because you know, I've seen many people, most all of those that I've seen, [I] didn't like doing that. You know, when they eat and they start feeding their kids, first they chew up the food to little pieces and when that was finished, what they were chewing--it was meat or something hard to eat--they just take it from their mouth and put it in their babies' mouths. I never used to like that, so I used to make a lot of soup, and I used to try and boil the meat and everything. I make [*sic*] lots of soup. You know, to make it tender, the meat. I would buy some, like hamburger, and I had a little meat grinder one time, grind the moosemeat there, make soup with that. And I never used to chew it up first and put it in their mouths.

The informants not only provided their children with food for survival and growth needs but also devised a teething food for infants. Teething infants were given a hard bone with meat or thick dried moose fat. These foods met both teething and nutritional needs of infants.

Traditional infant feeding practices made good use of nature's offerings, both for food collection and preservation. Wild berries were collected during the summer months and dried in the sun. These dried berries were given to infants during the winter. In addition, berries were boiled and the juice produced was a beverage for infants.

As mentioned, availability of food played a role in how and what was fed to infants. Traditional cooking methods also contributed to the form in which foods were fed to infants. Generally foods were boiled together; there was no separation of foods. Accordingly, infants were introduced to more than one food through a broth or stew. Elderly informants explained that the baby ate that which an adult ate, with the added condition that the baby ate in a "special way" (premasticated or mashed food). This practice is based on the informants' belief that the "baby is a human being" and consequently, "eats what a human being eats." One exception to this belief was identified, however. Muskrat meat was not given to babies for fear that it would give them heartburn. Otherwise, the infant was fed "what we ate."

Infant Care and Caregivers

Traditional methods of infant care included the moss bag (see Appendix E). Moss was employed as a traditional disposable diaper. Collected from the bush, moss was dried prior to use. While wrapped in the moss bag, the infant sat on top of the moss which was removed through an opening in the bottom of the bag when soiled. Informants attested that babies in their days never had diaper rash, because the moss had a healing effect. Participants pointed out that moss does not take moisture from the body whereas, diapers do. Moss is also believed to promote normal bowel function in an infant.

The Indian swing (see Appendix G) was described as the "babysitter" for the mother who had a heavy workload. Additionally, mothers carried infants on their backs (see appendix H) while they worked and gathered food.

Infants were breastfed, wrapped in a moss bag, and placed in the swing. Mothers stated that their infants would sleep for long periods while in the swing. As the swing was constructed from rope and an animal hide or blanket, it was very portable. Informants spoke of carrying rope and a blanket to set up a swing between trees when berry picking.

The only time a swing was not used for an infant was at night because it was considered bad luck to leave an infant in a swing overnight. Informants reported that infants left in swings during the night, died. Under normal circumstances, babies slept with their mothers at night so they were close at hand for breastfeeding.

Participants also disclosed traditional methods for treating "gassy babies", constipation, teething and fever. The practice for assuaging an infant with gas was to place camphorated oil on the stomach and wrap a muskrat skin around the abdomen. For the constipated baby a four to five inch piece of sinew was used. The sinew was soaked in water and a small amount of grease was placed on one end before inserting the sinew into the baby's rectum.

A herbal tea was placed on the gums of an infant who was teething. Informants believed that a teething infant was very susceptible to cold and had to be kept very warm. During the winter months the infant was kept indoors as much as possible to prevent him or her from becoming cold. Infants who had not been kept warm when teething had been known to die.

An infant with a fever was given a herbal tea to drink. The tea was cooled to lukewarm and served with a small amount of sugar. The tea was administered continually until the fever subsided. The tea was said to make the infant sweat. The sweating, it was believed, drew out the fever.

The traditional caregivers of an infant were the female relatives. The mother was the main caregiver owing to the fact that she breastfed the child. The grandmother and older female siblings also cared for the baby. This care included feeding the baby solid foods, wrapping the baby in the moss bag, and swinging the baby in the Indian swing. When asked if men cared for the babies, informants laughed and replied "maybe you train your men better these days, because in our days the baby was cared for by the woman". Moreover, participants stated that men were absent for long periods of time on hunting expeditions and therefore were not available to care for infants.

The Healthy Baby

With respect to the multiplicity of variables which contribute to a baby's health, informants overwhelmingly identified breastfeeding. The breastfed baby was also considered to have less problems with flatulence and illness. A healthy baby was reported as being fat and happy.

Additionally, elderly multigravidas and traditional birth attendants contended that infants in days gone by were healthier than infants are today. Informants described present day babies as always having colds and diaper rash. The lack of health of today's infants was described as the result of giving them "white man's " foods, including junk food and not dressing them properly. Additionally, one woman attributed present day children's lack of respect as the result of them having cow's milk. By drinking cow's milk children would acquire the attributes of a cow (i.e., stubbornness).

> I believe that the kids were more healthy before than they are now, I believe one of the things is the children are getting a lot of this white food and even the milk from the cow. I believe a lot of kids don't listen to their parents 'cause they're sucking on an animal instead of the mother's breast [87-year-old].

Despite this account other informants reported giving their children cow's milk. Additionally, these mothers did not express any concern about the possibility of cow's milk effecting a child's behavior.

Traditional informants identified cold as causing disease. As stated, cultural prescriptions were designed to prevent the body from becoming cold. Participants cited warmth as being therapeutic and therefore spoke of keeping an infant bundled to promote health and prevent illness.

> The difference from old to now, in how the young mother's take care of their babies is [that] we used to wrap them up in the waspison [moss bag] to keep them warm and free from disease. Children were healthy, [when] we used moss. Now babies are kept laying down half naked with very little clothes this [*sic*] causing a lot of the disease and colds kids are getting now [60-year-old].

Further probing revealed that these informants did not subscribe to the humoral "hot-cold" theory of disease (Harwood, 1971). Rather participants reported that if someone were to become cold they would become ill. Illness was prevented by insuring the body remained warm.

Summary

This chapter presented the traditional beliefs and practices of infant feeding of one Woodlands Cree community in northern Alberta. Although infant feeding practices and beliefs did exist, individuality with respect to infant feeding and care was tolerated. In connection with questions about variation in infant feeding, informants stated that mothers fed their babies in the best way possible with what was available. Additional data about infant care and childbirth were also included as informants volunteered this information during interviews. Practices and beliefs were rooted in the survival of their people during times of limited resources and harsh weather conditions. Despite the introduction of new methods of infant feeding, traditional practices and beliefs still remain a strong element of elderly multigravidas' and traditional birth attendants' perceptions of how to care and feed an infant.

V. PRESENT PRACTICES

This chapter contains data obtained from interviewing younger Woodlands Cree mothers following contemporary childbearing practices. In one case, information obtained from the spouse (35-years-old) of a participant is included. Among major findings included in this chapter are insufficient milk syndrome, weaning practices and methods by which these mothers learn about infant feeding and care, and finally, participants perceptions of "What makes a baby healthy?"and their preparation for childbirth and infant feeding are presented.

Characteristics of Participants

Present-day mothers who were interviewed ranged in age from 19 to 55 years. A total of 12 women were interviewed. Each informant had between one and eight children. All informants' children were born in hospital (the closest hospital is located 130 km from the informants home community) with the exception of one 51 year old's children. This 51 year old participant's first two children were born at home. Both children were delivered by her mother. With respect to the first birth, the informant's father assisted with the delivery. The birth of the second child was attended by the mother-in-law in lieu of the informant's father.

Changing Social Conditions

As stated, this group of Woodlands Cree's first recorded contact with outsiders occurred in 1895. In 1901, the religious orders of the Sisters of Providence and the Oblates set up a mission in the Desmarais area for the purpose of proselytism. Additionally, the Sisters of Providence began educating some children in the area and provided care for some elderly and infirmed Woodlands Cree. The federal government financially backed the Sisters work by paying $175.00 per year for the maintenance of a child (Sisters of Providence, 1901-1974).

Table 2: Characteristics of Present-day Participants

Informant	*Age (years)*	*Number of Children*
1	52	5
2	51	8
3	42	3
4	39	4
5	35	1
6	35	1
7	34	4
8	32	5
9	29	2
10	28	4
11	26	1
12	19	1

The introduction of church and government into this community brought new policies and practices with respect to childbearing and childcare. As mentioned, in 1929 a graduate nurse was brought into the community and a hospital constructed in 1934 for the purpose of providing westernized healthcare services (inpatient hospital services were provided by the Sisters of Providence until 1974). In 1957, the Department of Education in Ottawa authorized parents to send all children six years and older to school. In response to this decree a residential school with a dormitory for 150 children was constructed in Desmarais (Sisters of Providence,1901- 1974).

Throughout interviews informants spoke of their experiences in residential mission schools. Some women reported feeling very alone as they were separated from their families and often did not see them for 10 months of the year due to large distances and inadequate or non-existent modes of transportation.

> So I didn't see not [*sic*] really anyone at home because I was brought up in the Convent. [42-year-old]

Additionally, informants spoke of the contrast between life in the mission and life at home. Informants were instructed not to speak in Cree, not practice their traditional medicine and mission food was prepared differently than what these women had observed or learned from their mothers or grandmothers.

> They [the nuns] used to take us to the kitchen and show us how to make different kinds of things which was all new to me because I wasn't used to that. You're used to a big pot on the stove with moosemeat and turnips and carrots, everything all in one pot, fish and potatoes in another pot and bannock and you don't see all these fancy new meatloaves and all the stuff. [28-year-old]

Government introduced social services to the community which at times removed children from their families when the social worker identified a child as being neglected. Traditionally, children were cared for by other female relatives when the mother was not able to care for her offspring. Social assistance provided this group of Woodlands Cree with vouchers and cash to purchase food and clothing at the local Hudson's Bay store, rather, than obtaining food from hunting and trading furs for cloth and supplies at the store. Traditional informants spoke of working together and sharing their food prior to the introduction of social assistance.

Another contributor to changing social conditions was the introduction of outside services and employment, such as schools, a health centre and oil exploration in the community. Present-day informants are working for cash and attending school and report being more modern than their traditional counterparts.

Present Day Childbearing

Present day mothers still follow some traditional beliefs and practices with respect to pregnancy. When outsiders (teachers and nurses) in the community were pregnant, young Cree mothers observed them. Informants commented that they feared these nurses would miscarry because they were being too active during the first trimester. A 28-year-old informant spoke of her emotional reaction when she witnessed nurses engaging in athletics during their first trimesters.

> I was taught you can't go and play ball or anything, you just have to sit or else you'll have a miscarriage. So that's what I did, I'd just sit at home and do nothing . . . I see all the nurses when they're pregnant go out and play volleyball and you know or skate, and you know it's scary to think that you can do those things but yet you see these people doing them and they're not having miscarriages . . . that was all new to me.

With regard to prenatal classes offered by the health unit, informants did not attend them for two reasons. The first reason reported was "shyness"; informants did not feel comfortable attending the classes because the teacher of the classes was an outsider. Additionally, mothers reported that they felt more comfortable if a friend attended prenatal classes at the same time as them. Availability of prenatal classes also determined whether young mothers attended classes. Nursing shortages in the community prevented prenatal classes from being offered on a regular basis. Therefore, during some months of the year no classes were offered because a nurse was not available to teach. As the majority of present-day mothers bore their babies in the hospital, the traditional teaching and support for childbirth was not practiced (i.e., during labour and delivery and immediately post-partum). Women whose mothers either lived with them or near to them expressed that they were prepared for childbearing. Conversely, informants whose mothers were not available spoke of a lack of preparation for childbirth and being "scared."

The following quotation is an example of the manner in which a mother who was without the traditional supports for childbearing suffered during pregnancy and childbirth 13 years ago. This woman was living in a community 130 km. from her mother and other close female relatives. All her children were born at the local hospital. Although, her in-laws lived in the same town in which the hospital was situated, she received little support from them as they suffered from alcohol problems. Furthermore, her husband often worked out of town.

> Nothing was easy. I just don't remember anything that was easy for me. Like with ____, all through my pregnancy I got beat up until the day I went to the hospital. I had a real rough time with her. It is funny, I never miscarried. Five gallon pails, I used to carry those from my neighbor [*sic*] in the yellow house . . . He never beat me with ____, [her second pregnancy]. I had a worse time when I was in labour with him I was all by myself that time, babysitting at the same time. ____ [her husband] was up in Grande Prairie working. His mother was supposed to look after me and she got her pension in from back pay and so she had quite a bit of money so she just left. She just went out and started drinking. So I was by myself. Then my sister-in-law came and asked me to babysit and I was washing, all we had was wood so I had to wash with the brush, so I was washing the floor and I could feel the pain but I wasn't really sure that I was in labour so I kept on washing the floor. She came then about 7:00 and she asked me if I would look after her two boys because her mother was drinking so could she come to our house. She asked me how I was feeling and I told her that I was feeling alright. Then as time went by, I finished about 9:00 because I had two rooms that I had to wash the floor by hand, scrub it . . . Anyways I knew that I was in labour, the pains were coming regularly and I thought "oh boy." I was in trouble because I had two other kids plus ___ [her daughter] who was just small [18 months]. Anyways I figured that the latest they would come by was, they came the night before to check on me and I just assumed that they would come unless they had told me that they would come back tomorrow night. I was waiting for them. Finally it was getting later so I put the kids to bed and everytime I laid down the pains were feeling hard, they were about every half hour. I checked the time I never slept all night long . . . I started to feel [*sic*] to push and I thought "Oh my goodness, now I am in trouble." . . . So the oldest [child] was about five and the second was about four and the littlest was going on two. So I went and woke up that five year-old

> boy and told him that I thought I was going to have my baby. I told him to look after the kids. I want to go and check if your granny is home. They lived a little ways over, I would see if anybody is over there and then I would send them over. I had to get to the hospital, I told him. It took me about half an hour because I had to stop every so often because I was in such pain. There was a guy sleeping there [at her mother-in-law's house]-so I asked him where everybody was but he was half-drunk so he couldn't help me. I told him my kids were over there and he should go and watch them. I asked him where his granny was and he said that she was across the road here drinking still. She wasn't, so I just said forget it.
>
> So, I went to my neighbors and then that guy over there was deaf too. I banged on the door for quite awhile. It took 15 minutes before he came and answered the door. He didn't even answer the door, but he just came to the window. I told him that I was in labour but he couldn't understand me because he was half deaf. He couldn't understand so finally I just showed him that I was going to have my baby and finally he understood me. He said that he was all by himself, his wife was out drinking. So I didn't know what to do so I went back I was soaked already because of the water. It was about 5:00 or 5:30 in the morning and the dew on the grass soaked my feet. I went home and I told ___ [the five year old child] "I guess I just have to leave you guys. I have to try and get across the river here. Just wait and don't wake the kids up. I will send somebody as soon as I can but I don't know how long that is going to take me," I told him. So I went and I had to stop. I took a shortcut in the grass. By the time I got to ____ [a friend's house] I was soaked. I knocked on the door, I guess it was 7:00 by the time I got over there. ___ answered the door and he knew I was in labour. I couldn't even talk to him. My pains were coming, I don't know how many minutes apart. Then they rushed me to hospital. I barely made it to go[*sic*] inside. Then we had to go through all those tests and they were asking me all kinds of questions. I kept telling them that I could barely sit. Then they asked me how many minutes apart I told them that they were about five minutes apart. I was pushing there for a while but then I got cold again. They [the nurses] figured that maybe I was drinking. I said I wasn't. I was just soaked. Everything, my feet, my skirt was soaked. Anyways they rushed me to the labour room. At the time the doctor wasn't even there to deliver my baby. The nurses had to deliver it. They left me there laying there with nothing on for I don't know how long. I was just freezing, just shivering.

Although this informant delivered a healthy 10 pound baby, her labour and delivery experience had its consequences. Not only did this mother report being distressed during childbirth, but also complications including a post-partum hemorrhage following delivery.

Mothers who lived in close proximity to their own mothers and had their babies in hospital stated that their mothers were not present for childbirth. Informants disclosed two reasons which explained the absence of the gravid female's mother during labour and delivery. The first reason attributed the onerous distance which had to be travelled to the hospital (130 km. the majority of which was dirt road) as the cause. Secondly, hospital policy did not allow the mother to be present in the delivery room. Despite the fact that these mothers did express feeling prepared adequately for childbirth, they also spoke of being nervous during labour and delivery.

Breastfeeding

Traditional facilitators to lactation remained in place for some present-day mothers. These mothers reported staying with their own mother for one month post-partum during which time, they were relieved of household chores. Mothers of these informants encouraged them to breastfeed and helped with infant care. After these women left their mother's home, they continued to receive support. Telephones had been introduced which made it easy for new mothers to communicate with their own mothers regarding concerns which they might have experienced with respect to breastfeeding.

Participants who received support from their mothers stated that they enjoyed breastfeeding, with the exception of one informant. This informant reported that she resented having to breastfeed because her close friends did not. Instead, this mother reluctantly breastfed for two months until her own mother and grandmother consented to the weaning of her baby.

Although informants stated that breastfeeding was the best source of nutrition for an infant, not all breastfed their children. Some mothers did not breastfeed any children, whereas the other participants breastfed some of their children. The informants disclosed two factors which discouraged them from breastfeeding. Participants emphasized that they were too "shy" or "scared" to breastfeed.

> See I never breastfed him, mainly because I was scared or I felt uneasy about it, even though I should've when I think about it, because he was always sick [28-year-old].

The second inhibiting factor reported against breastfeeding was that a physician or nurse advised the woman that her milk was too weak and unfit for the infant. The following excerpts illustrate these factors:

> My milk was just no good it was too weak. So the doctor advised that I bottle feed.[Did the doctor tell you that the milk was too weak?] uhmm, yup. [Did he give you a reason why?] Well I was run down myself and too many children [he said] to bottle feed and give them baby food as much as I could [52-year-old].

> So my milk doesn't not[*sic*] rich enough to feed the kids that's why I didn't feed them. Cause the nurse told me she said to feed on the bottle, she said your milk was she tested my milk. [Who did?] The nurse. She looked at it yeah tested it I told her I said everytime I breastfeed them it's just like it's water, it's not milk so she test [*sic*] my milk she said my milk was [*sic*] just turned to water, it was nothing. [The nurse did?] Um hmmm [51-year-old].

> When they have babies, the doctor tells them, use a bottle and don't breastfeed them. That's what a doctor told me they say--I hear many of these young women say that. Because your milk is no good to breastfeed your baby; don't breastfeed your baby [35-year-old].

One informant reported that she attempted breastfeeding but stopped after two or three weeks because it was painful. This young mother was then able to breastfeed successive children and regretted not nursing her first child. It was quite common for some mothers to breastfeed second and third children but not a first child. Other participants, however, disclosed that they breastfed first, second and third children but not succeeding children.

The youngest informant (19-years-old) stated that she fed her infant by bottle initially. Approximately 24 hours after delivery, this mother decided that she would breastfeed because bottle feeding "just did not seem right." Mothers who breastfed some of their children and bottlefed others declared that they felt closer to those children who had been breastfed (i.e., "when you breastfeed a baby it feels more like your own baby.").

Informants who breastfed infants after bottle-feeding their first babies reported a number of variables which prompted them to change feeding methods. One reason for changing methods was that they believed the baby would be healthier. In other cases, they had "heard" that breastfeeding had a contraceptive effect. Also, mothers reported that they were not as "scared" and received more support from their mothers and other female relatives.

In general, present-day mothers did not breastfeed as their sole method as did their mothers and grandmothers. In addition, participants reported that they did not breastfeed as long as their mothers and grandmothers. Informants revealed that they had more options for infant feeding and were "more modern" than their mothers and grandmothers.

Initiation of Breastfeeding

Present-day mothers and traditional informants alike, reported that colostrum was a "watery" milk and that the breasts did not contain milk until the third or fourth day post-partum. Despite this belief, none of the participants withheld the breast from their infants for more than 24 hours. During this 24 hour period, infants were fed glucose water or formula by nurses. Informants cited two reasons for not initiating breastfeeding. Some mothers stated they were too tired to initiate breastfeeding following delivery. Secondly, infants were not given to mothers until "much later" (anywhere from 8 to 24 hours). In these cases, hospital policy regarding mother and infant contact determined the inefficacy of breastfeeding. One mother suffered considerably as a result of hospital policy 17 years ago. The hospital adhered to a strict four-hour feeding schedule. The mother was allowed only to have her infant at feeding time. The pain this woman experienced is evident in the following report.

> ___ [her infant] used to cry and I used to cry. I couldn't do nothing [*sic*]. I would go in the bathroom and cry and cry because I couldn't take her. Lots of times, I felt alone. After I had her I felt just like I had somebody that belonged to me. That is the way I felt. That is what I used to call her. I used to stand and watch 'my big girl' I used to call her. You and me against the world. So when she used to cry and I couldn't do nothing [*sic*] because of the schedules in the hospital, at 2:00 it was breastfeeding time. That was the only time I got to hold my baby. So I used to go in the bathroom and cry in there because we were just next door to the babies [her room was adjacent to the hospital nursery] [42-year-old].

Only one informant recalled that she was given her infant to breastfeed in the delivery room. In describing this experience, the mother said that her baby was not ready to feed and did not begin to suck properly until the third day post-partum. The infant's inability to suck properly was not identified to be a result of "watery" colostrum. Rather, the mother explained that the baby, simply, was sleepy.

Although present-day mothers considered that colostrum was a "watery milk," they did not follow the traditional practice of withholding the infant from the breast for two to four days. As stated, when present-day mothers initiated breastfeeding was largely a function of hospital policy and the mother's energy level following delivery.

Demand Feeding

Fixed breastfeeding schedules were not identified by informants. On the contrary, mothers stated they fed their babies when they were hungry. Mothers knew that their infants were hungry by the manner in which the infant cried. When questioned about the duration of a breastfeeding session, informants replied that it was "up to the baby."

Mothers stated they had received information on timing breastfeeding from health professionals. With respect to such information, one informant reported:

> I think a lot of us tend to more or less listen to what the doctor says and we should go by how we feel and what we've experienced [34-year-old].

Other participants made repeated mention of this confusion and asserted that every mother feeds her infant the "best way she knows how."

Informants also remarked that it was important to breastfeed an infant as frequently as possible in order to prevent them from losing their milk. Participants reported that their mothers had told them that their milk would "dry up" if they did not nurse their infants frequently enough.

Care and Diet of the Lactating Woman

Reports about the care and diet of a lactating woman from present-day mothers were consistent with the reports of traditional practices. All informants affirmed that a lactating woman must keep her breasts warm, and refrain from excessive activity. Excessive activity was defined as not being home enough with the infant. Mothers reported that a lactating woman who did not follow these prescriptions would lose her milk.

Present-day mothers, in similar terms to those articulated by their traditional counterparts, reported that in the event that a lactating woman's breasts were to become cold, her milk would turn to water. The strength of this belief for present-day mothers is evident in that lactating women wrap towels and flannelette diapers around their breasts when hanging laundry outdoors in cold weather. Alternately, informants reporting using breast pads and heavy sweaters and jackets when going outdoors in cold weather.

Responses to inquiries regarding prescriptive conditions for good breastmilk were almost identical to those of traditional informants. Present-day mothers assessed good nutrition and large amounts of fluids to be crucial for breastmilk production. Onions, alcohol, and "gassy" foods, such as cabbage and turnips, were avoided when breastfeeding.

In summary, present-day mothers carefully follow traditional diet and care prescriptions when breastfeeding. These prescriptions are reinforced by their mothers and older female relatives.

Breastfeeding as a Contraceptive

All informants reported that they had heard that breastfeeding prevented pregnancy. Present-day mothers cited the absence of menstruation as the reason for not conceiving when breastfeeding. Only two informants confirmed that they had used breastfeeding as a contraceptive. Of these two, one woman reported that breastfeeding had a successful contraceptive effect for her as evidenced by the fact that her children were two years apart. The other mother, however, remembered that she had become pregnant two months post-partum while breastfeeding.

In general, present day informants stated that they did not believe in breastfeeding's contraceptive effect. Only two mothers reporting the use of breastfeeding as a form of contraception. The other mothers employed the artificial contraceptive methods.

Wet Nursing

Although none of the informants reported practicing wet nursing, they were aware that their mothers and grandmothers had. As a matter of fact, one informant disclosed that she had been wet nursed by her aunt because her mother was ill.

A second-hand report of wet nursing was received. A young mother (24-years-old) who was breastfeeding was held at the local health centre for 24 hours while ill. While at the health centre, this mother's infant was cared for and breastfed by a neighbor. The neighbor, a woman in her early twenties, was breastfeeding her own child at the time.

Bottles and other Milks for Infants

The use of non-human milk and bottles for infants is quite common for present-day mothers. Informants stated that they had used infant formula and canned evaporated milk. The practice of giving canned milk to babies evolved in the 1940's. Canned milk is presently given to babies regularly, notwithstanding that infant formula is readily available.

Those mothers who fed their children infant formula, did so only for short periods and then switched to canned milk. Mothers gave three explanations for their preference for canned milk over infant formula. Mothers stated that canned milk had proved its nutritional value for their other children and felt no need to try a new product. Canned milk was also reported as being readily available. One mother believed that formula caused her infants to be obese, whereas canned milk did not.

As stated, canned milk has been available since the 1940's, as a result, it has undergone more scrutiny than infant formula. Informants' mothers and older sisters have fed their babies canned milk with success. Mothers who have used infant formula, on the other hand, have reported problems with their children and infant formula.

> I fed him different formulas and nothing seemed to agree with him [28-year-old].
>
> I noticed that with two of my kids, I started out with Enfalac® they'd get really fat so I would switch to Alpha® [canned milk]. Like I did that with the baby, she's using Alpha® right now [34-year-old].

Mothers disclosed that physicians had advised them to use infant formula. These mothers would try infant formula, but not for the period of time (i.e., six to eight months) recommended by physicians. After a two or three months trial period on infant formula, informants would opt for canned milk.

Present-day mothers prepared canned milk for their infants in one of three ways. One reported method of preparation was to mix two ounces of canned milk with three ounces of water. A younger baby (one to two months in age) received a differential proportion in the form of three ounces of canned milk to five ounces of water. An older infant would be given a 50:50 mixture of alpha® and water.

One informant described the unusual circumstance in which she gave her baby skim milk on the advice of a physician.

> Let's see, he was on Enfalac® a couple months, when he was a couple months old, and later on he got into skim milk. But I don't think that was very good for him because he was always hungry, you know. And the doctor told me that he was getting fat. And then, when he got older he got into quart milk, or homo milk. [How old was he when he started to have other kinds of milk?] Skim milk, he was about three months old, till about six or seven months old, and then he finally got homo milk [26-year-old].

Although this informant felt that her infant was always hungry on the skim milk regimen, she continued to give it to him. Her behavior was exceptional insofar as other informants reported not following fully a physician's advice. More commonly, mothers reported changing the milk their infants were drinking, according to their perception of what particular milk was best for the child.

At present, infant bottles are also easily obtained at community stores. Bottles are not used to feed infants milk exclusively, but also to hold soup and juice for infants' consumption.

As has been stated previously, present-day mothers perceived themselves to be "more modern" than their mothers or grandmothers. They enjoyed options, unavailable to previous generations, to breastfeeding for feeding their babies. Informants disclosed that they used bottles and non-human milk to allow them more freedom to work outside the home.

Reports of Re-initiation of Lactation and Relactation

One informant recounted a second hand report of re-initiation of lactation. The informant spoke of a friend who ceased breastfeeding her infant for four days, to allow for healing of her cracked nipples. After four days, this woman's nipples healed and she began breastfeeding again.

Only one present-day mother was able to report a case of relactation.

> I heard one story, the old lady across the lake. I don't know what her name is, I think she's a ___ she breastfed her grandson after 15 years. I think somebody said, and she did produce some milk, I don't know it makes you wonder I guess as long as there is somebody suckling there the milk will be produced [28-year-old].

Some informants thought relactation was possible yet they were unable to cite any cases. Other participants contended that they believed a woman only had breastmilk following immediately upon a pregnancy.

Insufficient Milk Syndrome

Four of the present-day mothers who were interviewed disclosed that they terminated breastfeeding because they did not have enough milk. These mothers reported that they gauged that they did not have enough milk because their infant would cry after nursing. Three of the informants were able to venture explanations for the insufficient quantity of milk which they were producing. The fourth mother did not hazard an explanation for her inability to produce sufficient breastmilk for her child. Following the birth of her first child, this woman found herself without traditional familial supports. However, she disclaimed that the absence of traditional supports was related to her lack of breastmilk. Due to her experience with her first child, this mother did not attempt to breastfeed successive children.

Informants reported a variety of reasons for their inability to produce sufficient breastmilk for their infants. One such reason was that the infant had been given a bottle and therefore was not breastfeeding frequently enough to stimulate milk production.

Additionally, these mothers stated that they had become too active (i.e, started to work outside the home or were going to school) and their breasts may have become cold as a result of increased activity which inevitably resulted in a diminishing milk supply. Yet another belief which was given maintained that these participants were not drinking enough fluids to produce breastmilk. One informant pinpointed her lack of seriousness about breastfeeding as a reason for insufficient milk production.

The three mothers who were able to identify reasons for insufficient milk believed that steps could have been taken to increase their breastmilk supply. These informants stated that if they eliminated some of the previously cited causative factors, they might have been able to produce sufficient milk for their infants. Despite their ability to identify reasons for inadequate breastmilk production, these mothers found the management of breastfeeding to be incompatible with their current lifestyles. One mother attempted to continue breastfeeding while working outside the home. In her absence, the baby was given a bottle.

> I would breastfeed in the morning and give the bottle at noon and breastfeed again at night and all night the baby had a lot of gas and wouldn't sleep so I think that could have gave [*sic*] the baby a lot of gas in the stomach [34-year-old].

By four months, this mother had completely weaned her infant from the breast.

Weaning

Those informants who reported breastfeeding their children related that they nursed their infants for a period of three weeks to two-and-a-half years. Four conditions leading to the initiation of weaning were named by the informants. Insufficient milk was reported by four mothers to be their reason for weaning. Another condition for weaning disclosed by mothers was that of returning to school or work. The perception that the child had been breastfed "long enough"(i.e., two to two and half years old) was reported as a motivation for weaning. The desire for more personal freedom was also cited as a reason for weaning.

> Why I want to quit breastfeeding them, even when I don't have a job or anything, like that, that's the way I like doing that feeding them for awhile and putting them on a bottle, cause I can't always take them where I go and I don't believe in sucking milk out of my breast and leaving it at home with the baby, so it's better to just put them on milk [32-year-old].

This mother weaned all her children when they reached the age of one or two months. These children were fed canned milk after being weaned from the breast, even though a physician had advised that she use enfalac® (an infant formula).

Present-day mothers reported using the same methods for weaning as did their traditional counterparts. Informants spoke of weaning their infants gradually, by introducing a bottle or solid foods in place of breastfeeding. This process of gradual weaning occurred over a period of two to four months. The other method used for weaning was minimal breastfeeding (Morse, et.al., 1986). Mothers of toddlers stated that they were only breastfeeding them once or twice a day. When these mothers weaned their children, they were in a position to reason with their child, owing to the child's maturity (i.e., two to two and a half years). Often, mothers used distraction to facilitate weaning (i.e., distracting the child with a toy instead of nursing during a routine breastfeeding time). Additionally, some mothers reported that they had to let an older child cry for one or two nights until the weaning behavior was established.

One informant had not weaned her child (four months old) by the end of data collection. This mother had introduced solids to her infant at two months of age, and by four months, was not breastfeeding as frequently. When questioned about her weaning plans, this mother was unsure about the duration of time for which she would continue to breastfeed. She did project, however, that she would eliminate daytime nursing by the time her infant was six or seven months.

In spite of the fact that present-day mothers reported using weaning patterns that were similar to their own mothers and grandmothers, the age at which a child was weaned differed. Some young mothers recalled that they weaned their children at an earlier age than had their traditional counterparts. Significantly, the reasons given by present-day informants for weaning a child varied from those of their mothers and grandmothers.

Introduction of Solids

These mothers introduced solid foods between the ages one month to six months. Some informants reported introducing solid foods individually in order to assess comparatively the degree to which an infant tolerated a new food. Other mothers introduced simultaneously more than one food (especially when giving soup). Two mothers explained that they served solids to their bottlefed children at an earlier age than they did to their breastfed children. These mothers felt that their bottlefed infants required solid foods at an earlier age because they were always hungry.

Infant pablum was the most common first food used. One informant reported introducing processed baby foods, without resorting to pablum. Informants utilized a mixture of traditional and present-day foods for feeding their infants. Some mothers disclosed that they would use commercial baby fruit in addition to feeding their infants the moosemeat, soup, fish and vegetables which were served traditionally. In other families, mothers fed their children a variety of baby foods along with traditional foods. Participants again spoke of assuming a "more modern" approach with respect to the solids they fed their infants.

> Because I'm sure that, you know, it was--what we survived on was all the wild foods, whereas now, you know, being modern, we don't need to bring our kids up like that anymore. There's just too many other good stuff, that you can supplement. [You still use some things like moosemeat?] Oh yeah, we still eat all that, moosemeat, bannock, ducks if we have it, fish. And that's about it. I don't eat rabbit. My kids will eat rabbit when it's at my mum's or wherever they're at, but they only eat the soup [29-year-old].

As exemplified by this mother, informants reported that the present-day changes in feeding practices were related to the availability of new foods. Food sources, in traditional times, they insisted, had been strictly a means of survival for the informants' mothers and grandmothers, as opposed to a selection process aimed at meeting tastes and conventions.

Traditional informants were not all in agreement, however, with this belief. Many older multigravidas established that they had cultivated gardens and that food was bountiful. Other informants contended that they had survived on that which was available.

Present-day mothers identified four channels by which they learned about introducing solid foods to their infants. The first and most common source from which they learned was their female relatives (i.e., mothers, mothers-in-law and grandmothers). Secondly, some mothers reported they received information from health professionals. These mothers also disclosed that they did not always follow this advice.

> I say about five months [referring to the age at which she introduced solids]. Cause I remember the doctor he used to say that you know the babies you shouldn't start feeding the babies till they're about six months old. And it was always before that I would start feeding the kids [34-year-old].

Thirdly, informants asserted that they learned on their own. Often these women were without traditional supports and were "scared". Nonetheless, they discovered a viable pattern for feeding their infants.

> It was more modern for us. Either we used to use baby food . . . . It was scary because I had no one to teach me anything. I was by myself in Slave Lake [130km away]. My mother was over here and my aunties. I didn't have any experience. I was scared she might choke on her food [42-year-old].

The fourth manner in which some informants learned was by reading. This latter way of obtaining knowledge was done in supplementary fashion to the teachings of the informant's mother.

> Yeah not to feed things that the baby can't chew, you know, until the baby starts having some teeth. She [her mother] told me to give arrowroot or whatever the teething crackers. They never had things like that years ago, but they--these are you know, as you go along, when you see other people feed their kids these things, then you got to try them too. So, you know, you were learning from other people as well, and besides reading [29-year-old].

As this mother has mentioned, informants observed what "other people"(i.e., friends) would feed their children. The observation of other mothers' infant feeding practices involving new foods aroused the informants' curiosity and courage. In response, participants would test these new foods with their infants.

Premastication

Two present-day mothers reported practicing premastication of solids for their infants. The other informants recollected that they did not need to premasticate foods because they owned blenders or food grinders to prepare foods for their babies.

In contrast, two informants rejected the practice of premastication. These participants had been taught by female relatives to premasticate solids prior to giving them to an infant.

> The funny thing is that there was [*sic*] some really strange things that she'd[her mother-in-law] been taught when she was bringing up her kids like when your baby is very small I guess the mother used to chew the baby's food for the baby and then put it in the baby's mouth. I wasn't gonna [*sic*] accept that [28-year-old].

In place of premasticating solids, these informants mashed food or fed soups to infants until the infants were able to chew on their own. In addition, these mothers used processed baby foods for their infants.

Infant Care and Caregivers

Present-day mothers still practice in reduced form traditional methods for infant care. In the same manner as their mothers and grandmothers had done, present-day informants nursed their babies, wrapped them tightly in a moss bag or blanket, and placed them in an Indian swing. By wrapping their babies securely, informants expected that the infants would sleep soundly and for longer periods. Although present day mothers reported using moss bags, only one stated she used moss.

One informant revealed that a physician had admonished her not to wrap her youngest child because the infant, the physician warned, would not grow correctly. Although this woman followed the physician's instructions, she did not fully believe him.

> The doctor told me otherwise not to do that because I was keeping the baby from growing so after about the third child I didn't wrap them the way my mom told me. The only thing that I know that with the first two I think three babies I used to wrap them the way my mom showed me, wrap them really tight and with the last one I just left her loose and there was a difference there like she didn't sleep as long or she'd[her infant] wake up every now and then but with the babies that were

> wrapped tightly they slept long for long periods of time. That was the only difference that I found.
> [You had been told by the doctor not to wrap them?]
> Yeah so I tended to listen to him with the last baby and in fact with my first visit with the last baby I wrapped her really tight when I went to visit the doctor and right away he noticed that and started to unwrap the baby and told me not wrap them like that. The doctor said I'm stopping the growth on the baby and but still my other three kids they grow up to be big [34-year-old].

This mother's experience had taught her that wrapping her babies produced a beneficial outcome. Her babies slept well when wrapped and were presently growing well.

Some present-day mothers reported using the Indian swing for their infants. These mothers spoke of the depth of their baby's sleep after swinging in this device. Those mothers who did not use the Indian swing declared that they did not want the baby to become spoiled. Informants (who used and did not use a swing) disclosed that an infant became too accustomed to the swing and would not go to sleep unless they were swung. This created a problem for mothers who would often travel to visit friends whose accommodations were not conducive to setting up a swing. To set up a swing, two large hooks or nails, secured in a wall or other sturdy structure, are needed.

> I used the swing until she [her infant] was over a year old but, it's good in a way but it's bad when you go travelling. [Why is that?]Some kids will get so used to a swing that they won't sleep unless they're in a swing. In fact, when we went to Edmonton and she wouldn't sleep, so we took a sheet and we held it on both sides and we swung her, but that I've heard quite a few people say now, once you put them in the swing they more or less stick to a swing [35-year-old].

> And when ___ [her sister's] baby came here you know that little girl is not even two--she just cried and cried so finally I had to put her in a basket, and tie it to she swings. That was the only way she was able to sleep, if she was swung.[I remember you had that laundry basket.]
> Yeah and I tied it to my closet. Yeah, just like a homemade swing. It's good to have a kid in a swing but it's a disadvantage when you--especially if you're always going somewhere. [It's not easier, you don't think, to take a rope along and make it?] Yeah, but in an apartment like this, where can you--? I had a piece of rope somewhere, and I think I used a tie or a belt, I think it was. Because when you're in an apartment, if you don't own your own home, you can't go, start, you know, putting these great big nails. So that's the disadvantage there, about the swing. It's good, but--yeah, I'm sure, you know, if I have any more kids, I won't be using it [29-year-old].

Although, informants identified the useful aspects of the Indian swing, today's lifestyles infringe upon its applicability. As a result, the use of the Indian swing today is limited.

Present-day mothers use a combination of traditional methods and western medicine for treating infants' ailments. Informants reported that their grandmothers or mothers would make herbal mixtures for teething and febrile infants. Additionally, informants used teething remedies such as Orajel® and Tylenol® for infants.

In treating flatulence problems, mothers spoke also of using traditional methods and western medicine. Gripe Water® and Ovol® were reported as treatments for an infant with a stomachache. Warm towels were wrapped around infants' stomaches on occasions when they were perceived to have gas.

Informants reported receiving assistance form their mothers and grandmothers in caring for their infants. In some cases, the mother or grandmother would attend to a baby at night for the purpose of allowing the mother to rest. Older siblings also still help with younger children. Present day fathers appear to be assisting more with child care than their traditional counterparts did (it is often the father who brings a sick child to the local health centre). The husband (35-years-old) of one informant stated, "you help make them (children), you help care for them." Nevertheless, the mother presently remains the primary provider of childcare.

The Healthy Baby

These women stated, like their traditional counterparts, that breastfeeding makes a baby healthy. Some informants cited their reason for breastfeeding was because they believed a breastfed baby was healthier than a bottlefed baby. One informant disputed the superior value of breastfeeding, contending that no difference in health could be discerned between the child she had breastfed and the one she had bottlefed.

Present day mothers described their children as healthy, with the exception of one mother. This mother remarked that her baby had been admitted several times to the hospital for respiratory problems. Recalling that this child had been bottlefed, this mother stated that she thought her child would have not been ill perhaps so frequently, had the child been breastfed. Although the majority of the informants had healthy children, they did speak of the frequency with which today's babies are hospitalized.

Present-day mothers identified cold as causing illness and warmth as being therapeutic. Further probing by the researcher revealed that these mothers did not subscribe to the humoral "hot-cold" theory of disease (Harwood, 1971). These beliefs about cold and warmth are consistent with the beliefs of traditional informants.

Summary

Present-day infant feeding practices and beliefs of one northern Alberta Woodlands Cree community have been portrayed in this chapter. Additional data concerning infant care and childbirth were also included as participants volunteered this information during interviews.

Although mothers are utilizing new methods of infant feeding and care, they are still cognizant of and influenced by traditional practices and beliefs. Despite the introduction of new infant feeding methods, present day mothers still practice traditional methods. In contrast to the adherence of traditional practices and beliefs, mothers, currently, also are foregoing traditional infant feeding and care practices for "more modern" methods which they perceive to be better suited to their lifestyles.

VI. DISCUSSION

In this chapter, some of the traditional and present-day infant practices of one group of northern Alberta Woodlands Cree are discussed. An appraisal of the research methods and the limitations of the study are presented also. The discussion focuses on the changes in infant feeding practices between generations, the consequences of taking childbearing out of its cultural context, and the importance of understanding infant feeding and care within the context of culture. Finally, recommendations for future research as well as practical implications for nursing practice are proposed.

Discussion of Research Methods

There is a dearth of knowledge concerning the infant feeding practices of the northern Alberta Woodlands Cree. The documentation and interpretation of infant feeding methods, therefore, became the initial steps which were taken with a view of understanding Woodlands Cree infant feeding practices and beliefs. Unstructured interviews were well suited for identifying Woodlands Cree infant feeding practices and beliefs, for the interviews allowed informants to express their experiences and perceptions freely. The inductive approach of these interviews provided clues to emerging infant feeding patterns and common practices and beliefs of Woodlands Cree mothers.

As more data were collected, patterns of the Woodlands Cree mother's experience of feeding and caring for an infant, emerged. The flexibility of unstructured interviews allowed for verification of these patterns by means of the use of probing questions. Additional interviews elucidated patterns with respect to infant feeding practices. A further technique of interviewing secondary informants provided corroborative evidence of Woodlands Cree infant feeding practices and beliefs.

All interviews, with the exception of four, were conducted in informant's homes for the sake of convenience and for the accustomed setting which the homes offered to the interviewee. The four interviews, involving three respondents, were conducted outside informants' homes at the behest of the informants . All three informants were taking time off from work for the interview.

Participants were comfortable within the confines of their own homes and, consequently, relaxed during interviews. The home setting enabled participants to illustrate certain practices by demonstrating them (i.e., how to wrap a baby or how to set up an Indian swing), given that they had at their disposal their infant and the necessary equipment. The researcher was able to observe, furthermore, informants' naturally occurring practices at home.

Despite the many advantages of conducting home interviews, there were times at which the home setting hindered an interview. Occasionally, the informant was distracted by children or noise presented a problem when tape-recording in a home which offered little privacy.

Group interviews involving different generations did not provide as much information as one-on-one interviews. Younger informants did not contribute as much as older informants during group interviews. Younger women, habitually, would listen to the remarks of the older women. Some informants requested explicitly not to be interviewed in a group.

Informants were selected by the researcher for the knowledge which she believed they might have, and for their interest in sharing it. As participants took pride in their abilities as mothers, they were highly motivated during interviews. This sense of pride enabled mothers, without difficulty, to articulate their perceptions and experiences of infant feeding and care.

The sample size of 27 (25 women and husbands of two of the informants) was adequate. This sample size allowed for saturation of categories with data to occur.

And finally, the interpreter used in this study contributed to the strength of the study.

The interpreter developed such an insightful understanding of the study that she would ask the researcher if the researcher wished to pose a question which had been asked in a prior interview. The interpreter's purpose in reminding the researcher of a previously asked question was to ascertain whether or not the researcher had forgotten to ask a particular question.

Limitations of the Study

One limitation of this study was that the sample was not fully representational of all Alberta Woodlands Cree mothers in that mothers under the age of 19 years were not interviewed. Therefore, practices and beliefs of teenage mothers were not obtained.

Additionally, information about health professionals' teaching and support came only from the recipients of the teaching and support. In recognizing that there may be disagreement between the health professional's actual encoded message and the decoded message which the informant received, it remains important to record the mothers' perceptions of the support and teaching which the mothers received from nurses and physicians. Further study should include interviews with health professionals in order to determine their perceptions of the infant feeding practices of Woodlands Cree mothers and the type of information which they gave.

Despite the limitations, this study is, nonetheless, significant. This study has documented traditional and present-day infant feeding practices of a group of northern Alberta Woodlands Cree, information that had previously not been documented.

Changing Childbearing Practices

This particular northern Alberta Woodlands Cree population is undergoing a rapid transition. The stressors of new lifestyles and changing economic and educational systems are resulting in the disintegration of the traditional mode of living. Reports of traditional and present-day informants illuminate not only many changes in infant feeding practices but also changing practices in childbearing and social conditions. These changes have coincided with the westernization of this Woodlands Cree community. This westernization occurred with the introduction of church and government to the community.

Agents of the church and government instructed this group of Woodlands Cree to refrain from their cultural practices and instead follow the religious, health and educational practices of the church and government. As a result the traditional roles played by many community members were abolished and the traditional social support network broke down. Therefore, present-day mothers are without the social support networks and roles that their traditional counterparts had. Additionally, many mothers grew up in residential schools away from their families and did not observe infant feeding practices and care. The effect of the changing religious, health and educational systems on group solidarity, health and family relations for this group of people warrants further investigation.

In particular, the medicalization of childbirth has taken childbearing out of the context of its culture, for this community. Childbirth was traditionally conducted at home. This practice of homebirth enabled traditional birth attendants and mothers of gravid females to teach and support mothers during labour, delivery, and immediately post-partum. Presently, women deliver in hospital (130 km from their community) without traditional supports. Reflexively, traditional teaching and support have been abandoned during labour, delivery, and the post-partal period.

As cultural practices and beliefs regulate important issues such as nutrition in pregnancy and the type of assistance and teaching provided to a woman from conception to weaning (Mead & Newton, 1967), the removal of childbirth from its cultural context is not without consequences. Davis-Floyd (1987) has identified that present day obstetricians follow a technological model of birth, that is, a model which focuses more on machines than human beings. For this group of Woodlands Cree, the technological model of birth is a radically new phenomenon. The traditional birthing practices of the Woodlands Cree made provision for the physiological but also the psychological well-being of mother and infant.

In other words, the mother and neonate were the center of attention. In addition, support and teaching for breastfeeding occurred during the immediate post-partum period.

Present-day informants' reports of isolation and distress during labour and delivery provide evidence that hospital births are not meeting their emotional needs. Those women who delivered in traditional fashion spoke of feeling prepared for labour and delivery, whereas, mothers following contemporary childbearing practices are without social supports. Research has indicated that a woman's birth experience can influence her confidence, her ability to mother, and may colour future childbearing experiences (Affonso, 1986; Peterson, 1981). Thus, maternity care which addresses the psychological and emotional needs of the client is crucial for mothers and their children alike. Further, it is important that expanded investigations be conducted to disclose the psychological ramifications of hospital birth on present-day Woodlands Cree mothers and their infants.

The Cultural Context of Infant Feeding

As stated, infant feeding practices cannot be isolated from the underlying cultural ideology (Ebrahim, 1976; Gonzales, 1963; Harrel, 1981; Jenkins, et. al., 1985; Lepowsky, 1985, Maclean, 1966; Marshall & Marshall, 1970; Morse, 1985; Ojofeitimi, 1981; Raphael & Davis, 1985). While medical researchers (Cunningham, 1979; Hildes &Schaefer, 1973; Schaefer,1971,1977; Timmermans & Gerson, 1980) are identifying the negative consequences of bottle feeding and decline of breastfeeding among native populations, they are failing to recognize that childbearing has been taken out of the context of its culture. Decontextualization has been imposed by requiring births to eventuate in the hospital. For this particular group of native Canadians, infant feeding and care remains closely linked to the childbearing process, as traditional teaching and support were made available predominantly during the immediate post-partal period. It was during this period that support and encouragement for breastfeeding were practiced traditionally. Research (Sosa, 1980) has shown that women who have a doula (Raphael, 1973) with them in the delivery room, tend to breastfeed for more months than those who do not. Whether or not this practice would lengthen the duration of breastfeeding among this group of northern Alberta Woodlands Cree is a topic which merits further investigation.

Breastfeeding

As is the case with other cultural groups (Ebrahim, 1976; Conton,1985; Chowning, 1985; Gonzales, 1963; Harrel, 1981; Morse,1984; Morse, Harrison & Williams, in press; Nardi, 1985) this group of northern Alberta Woodlands Cree holds beliefs and prescriptions with respect to breastfeeding. It is interesting to note that informants reported breastmilk is not a substance to be wasted. This belief is consistent with the philosophy of a northern Alberta Cree healer that nature should not be wasted (Schwartz, 1987). The strength of the prescriptions and beliefs for present-day mothers is evident in their reports of the exigency of following these prescriptions to promote successful breastfeeding.

Beliefs and practices with respect to colostrum are also found among this group of Woodlands Cree. All informants reported that the first milk in the breast was a "watery milk" and offered very little of nutritional value to the baby. In connection with this belief, some traditional informants reported that they practiced withholding the breast post-partally for two to four days. The effect of withholding of the breast post-partally on the duration of breastfeeding for these women is an area that requires further investigation. Reports from traditional informants that they breastfed their infants for two years indicate that the practice of withholding colostrum did not have a negative effect on the duration of breastfeeding. Perhaps traditional methods of feeding a neonate may have had a positive effect on the duration of breastfeeding as nipple confusion (an infant becoming confused by having to obtain milk from two sources, breast and bottle) would not have occurred. Traditionally, an infant was wet nursed or sucked on a piece of cloth prior to being breastfed by his or her mother. Consequently, the new mother may not have experienced sore nipples as a result of the infant not being able to attach himself or herself to the breast correctly due to nipple confusion .

The success enjoyed by these women as breastfeeders can be attributed to the presence of a doula (Raphael, 1973). The doula's primary role is to assist the mother "to mother" as well as to provide teaching and support with respect to breastfeeding. The mother, or another female relative, played the doula role for these women. Post-partal cultural prescriptions also facilitated lactation for the new mother by relieving her from all household chores for one month.

Three cultural prescriptions surrounding lactation produced the added benefit of promoting successful breastfeeding by attending to the infant's and mother's physiological well-being. One prescription instructed the lactating woman to be extremely cautious with regard to becoming chilled so as to prevent illness.. A second prescription stipulated that an infirm lactating woman should be discouraged from breastfeeding by transferring the nursing function to another lactating woman. Breastfeeding during pregnancy, in accordance with the third prescription, was to be discouraged.

The decline in breastfeeding among native Canadian women has been documented (Schaefer & Spady, 1982; Stewart & Steckle,1987; Stewart, 1984). The major reason for the decline has been reported to be the product of technological advances reaching previously isolated communities. Present-day informants reported various reasons for not breastfeeding, one of which appeared as the desire to be "more modern". These informants felt that there were other options to breastfeeding which were available and preferable.

The absence of the traditional doula (Raphael, 1973) for some present day mothers influenced their experiences of feeding their infants. These informants reported feeling "scared" and unprepared for feeding an infant when living away from their mothers and other older female relatives. Yet, the absence of the traditional doula does not completely explain changes in breastfeeding patterns between the generations of this group of Woodlands Cree. Although some informants were encouraged by their mothers to breastfeed, some chose to refrain absolutely from breastfeeding, or breastfed only for a short duration (i.e., one to two months). In marked contrast to previous generation's tenets, these women stated that breastfeeding was incongruent with their lifestyles. Wishing to work or attend school, breastfeeding did not appear practical or feasible to them.

Cultural beliefs with respect to lactation encourage the mother to engage in restricted activity and to nurse frequently with a goal of stimulating milk production. Therefore, these mothers' desire to work or attend school placed them in direct conflict with traditional prescriptions for breastfeeding. When citing reasons for terminating breastfeeding, these informants explained that increased activity and infrequent nursing of an infant occurred when they returned to work or attended school, effectively rendering breastfeeding impossible. These mothers need new methods to be able to successfully breastfeed with their current lifestyles.

Insufficient Milk

Research (Davies & Thomas, 1976; Goodine & Fried, 1984; Gulick, 1982; Tully & Dewey, 1985; Whichelow, 1982) which has investigated factors associated with the early termination of breastfeeding has identified "insufficient milk" as a common reason. With the exception of one traditional informant (her lack of milk was related to being frightened during labour and delivery), all elderly multigravidas reported having adequate breastmilk to feed their babies. For traditional informants, insufficient milk was not an identified reason for terminating breastfeeding.

In contrast, four present day mothers reported that they were unable to breastfeed because they did not have enough milk. One of these mothers was unable to venture an explanation for the causation of the insufficient quantity of her milk. Three other informants, on the other hand, were able to explain their lack of milk. In a manner similar to Whichelow's research (1982) with other mothers, these Woodlands Cree mothers perceived their milk to be insufficient because their infants would cry and appear hungry after feedings.

The reasons, given by mothers who recounted that they had insufficient milk, support Gussler's and Briesemeister's (1980) contention that insufficient milk may be the result of the abandonment of traditional infant care practices, the breakdown of extended social networks and interference of the let-down reflex. These mothers wanted to work or attend school and were prohibited from taking their infants with them. An alternative feeding method was called for during the mother's absence. Elderly multigravidas spoke of always carrying their children with them wherever they went. The need for a babysitter, they recalled, never arose. For the elderly multigravida, the infant was always present for breastfeeding. ~~With the cha~~nge in lifestyle for present-day Woodlands Cree mothers, it is not always possible to rely upon an infant's presence.

Extended social networks have broken down for this group of Woodlands Cree. Present-day mothers have not been in close proximity to female relatives who would have traditionally, provided the support which they needed for breastfeeding. Nevertheless, one mother, who reported insufficient milk and the absence of traditional supports, felt that these factors did not constitute the cause of her lack of milk.

Mothers identified chilled breasts and an increase in activity as causing their insufficient milk production. The increased activity may be accompanied by a commensurate increase of stress. Conceivably, a higher stress level may inhibit their let-down reflex. Newton and Newton (1967) established that the effect of stressing a nursing mother may be the inhibition of milk production.

Introduction of Solids

Similarly to other cultures (Jenkins, et. al., 1985; Maclean, 1966; Morse, 1985; Nardi, 1985; O'Gara & Kendall, 1985; Raphael, 1979), the introduction of non-breastmilk food sources for infants begins early in life for this group of northern Alberta Woodlands Cree.

Beginning with soup and premasticated solids, infants were mixed-fed (given breastmilk and other foods) traditionally from an early age.

Research (Carrier, 1985; Counts, 1985; Marshall & Marshall, 1970; Nardi, 1985; Raphael & Davis, 1985) indicates that changing patterns of infant feeding are the result of multiple variables. These variables include changes in the domestic relations between the infant's parents, the presence or absence of a support person or doula (Raphael, 1973) for the breastfeeding mother, increased workload of the mother, employment for the mother outside the home, and emulation of that which is thought to be dominant westernized practices. For this group of northern Alberta Woodlands Cree, changes in present-day infant feeding practices appear to be related to many variables. Certainly, the availability of canned commercial milk provided the Woodlands Cree mother with a new option for feeding an otherwise breastfed infant. Canned milk freed the mother from the responsibility of having to feed an infant as someone else could easily give the child canned milk. With this freedom mothers were able to engage in other activities such as working outside the home and attending school. These new activities, however, were accompanied by new stressors for present-day mothers. Not only did these women have the responsibilities of children and home but the additional tasks associated with paid employment and/or school. Therefore, to reduce these competing stressors, mothers chose other options for infant feeding.

Another factor which influenced infant feeding practices was the advisory role played by health professionals. Mothers spoke of health professionals' recommendations that they not breastfeed, but introduce infant formula and prepared baby foods. Those mothers who perceived their breastfeeding to be unsuccessful or too demanding would follow, with little resistance, the health professionals' advice.

The availability of prepared baby foods represented yet another variable which influenced changes in infant feeding practices. Present-day mothers envisioned themselves

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as being "more modern" than their mothers and grandmothers. Often, babies were fed traditionally whatever foods were available. Presently, the mother has a wide range of foods to choose from, so that infant feeding practices have apparently adapted from times of survival to times of surplus.

Despite changes in infant feeding practices, present-day Woodlands Cree women maintain certain traditional practices. Some mothers still introduce solids at an early age and premasticate solids for their infants. Mothers continue to give their infants traditional foods such as soups and wild meats. One final persistent maternal practice is the introduction of more than one food at a time, especially in a traditionally prepared soup.

As with other traditional cultures (Chowning, 1985; Morse, 1984; Nardi, 1985), this group of northern Alberta Woodlands Cree has not lost all infant feeding beliefs and practices through exposure to the outside world. An 87-year-old informant attributed present-day children's lack of respect as the result of them drinking cow's milk. By drinking cow's milk children would acquire the attributes of a cow (i.e., stubbornness). Morse (1984) also found a similar belief among Fijians.

Most importantly, these Woodlands Cree mothers feed their infants with foods which they perceive to be most appropriate for themselves and their children. This practice is consistent with those of mothers in other cultures (Rapheal, 1985).

Weaning

Gradual weaning was the most common weaning method reportedly used by informants. Many authors (Goldfarb & Tibbets, 1980; Mclaren & Burman, 1976; Parsons, 1978; Riordan, 1983; Williams, 1986; Wood & Walker-Smith, 1981) recommend this method of weaning for its value as a gentle way to end breastfeeding. Through gradual weaning, mothers were able to reduce the breast discomfort that engorgement causes and minimize the psychological trauma which abrupt weaning might cause for mother and infant. This group of mothers also reported using minimal breastfeeding, which has been suggested by Morse,et, al., (1986) as a method of "slow weaning". Informants responded to questions on weaning by stating that they were only breastfeeding one or two times a day when the child was older (over one year of age). Terminating breastfeeding was easy, as a consequence; mothers experienced no engorgement and the infant could easily be distracted during a routine nursing time.

Weaning patterns were similar for traditional and present-day informants. Reasons given for weaning, however, differed between the two groups. In addition to the reasons cited by traditional informants for weaning, present-day mothers spoke of weaning a child because they wanted more freedom or because breastfeeding was inconvenient for them. As a result, these women weaned their children at an earlier age than did their mothers and grandmothers.

Other researchers (Riordan,1983; Yeung, 1983) have identified that a reason mothers have terminated breastfeeding was because it was inconvenient, particularly when they wanted to return to work. Since many present-day informants wanted to work or attend school, they inevitably terminated breastfeeding because it was not feasible for them.

Relactation

The phenomenon of relactation has been documented in other cultures (Conton, 1985; Jelliffe, 1962; Mead,1967; Quain, 1948; Slome, 1956). Relactation was often practiced as a means of survival by this group of Alberta Woodlands Cree.

Auerbach and Avery (1981) found in studying induced lactation (breastfeeding without prior pregnancy) of adoptive mothers, that these women were able to produce milk but also needed to supplement their infants with another milk source. Such form of supplementation is consistent with this group of Woodlands Cree's reports of relactation. While grandmothers were reported to have breastfed their grandchildren, they also offered them supplements of sugar, flour or oats.

Implications for Nursing Practice

The implications for nursing practice derived from this study can be subsumed under the heading of understanding infant feeding within the context of its culture. The development of nursing support and teaching protocols, furthermore, must be effected in such a way that mothers are treated as subjects rather than objects. To do otherwise would be to condemn nursing support and teaching protocols to, at best, unsuccessful interventions and, at worst, to cultural genocide.

Presently, researchers (Stewart & Steckle, 1987) have identified suggested improvements to hospital policies and protocols (serving native Canadians) which, if implemented, are intended to promote successful breastfeeding. One such recommendation calls for the initiation of breastfeeding half-an-hour after delivery. This particular recommendation is not feasible for this group of northern Alberta Woodlands Cree for two reasons. First, there is a cultural belief regarding the first milk in the breast which discourages breastfeeding an infant immediately post-partum. Secondly, present-day mothers who reported that they did not follow the traditional practice of withholding the breast immediately post-partum, indicated that initiation of breastfeeding within a half-hour of delivery would not have encouraged them to breastfeed nor would early initiation of breastfeeding have increased the duration of breastfeeding. Rather, these women reported infants and mothers were too sleepy to successfully breastfeed immediately post-partum. This example illustrates that it is imperative that mothers contribute to the development of breastfeeding protocols, to ensure the success of such a protocol.

Similarly, nurses should include elderly multigravidas and traditional birth attendants in programs designed to support and teach new mothers. This recommendation is particularly cogent in the circumstance in which it is possible to validate a traditional practice. Present-day mothers, this study posits, still receive support and encouragement from their mothers and grandmothers. To overlook the importance of existing traditional resources, in this researcher's opinion, would be an egregious error. Existing traditional resources extend to female relatives and other mothers with respect to infant feeding and care. Elderly multigravidas and traditional birth attendants are extremely knowledgeable and valued community resources, as well. These women have successfully raised large families and take pride in having done so.

As nursing services are often lacking or are in short supply in isolated communities, a program which incorporates elderly multigravidas and traditional birth attendants could increase services to these communities. It is important to note that present day mothers reported shunning prenatal classes because they were too "shy" and felt uncomfortable with people they did not know. Perhaps present-day mothers would have been more comfortable in a scenario in which older multigravidas conducted classes.

In acceptance of the finding that breastmilk has been identified as the best source of nutrition for an infant for the first four to six months of life (Canadian Pediatric Society, 1978), promotion and support of breastfeeding are extremely important. Given that all informants reported breastmilk was the best milk for an infant, promotion should not be difficult. Cree mothers are not breastfeeding because they are unaware of the benefits of breastmilk, rather their reluctance to breastfeed is a result of their altered lifestyles. Breastfeeding, present-day Cree mothers report, is not in harmony with their altered lifestyles, due largely to the reality that mothers are now working outside of the home and attending school.

Mothers reported that expressing breastmilk was inconvenient. They also stated that giving a substitute bottle led to a shortage of breastmilk. Obviously, suggestions which run counter to these values would not appear to be viable options for nursing mothers working outside the home. To effectively support breastfeeding mothers, certain changes in school and workplaces may be needed. For example, provisions could be made for mothers who are working or attending school to have permission to keep their babies close at hand for breastfeeding.

Nurses should design teaching strategies which include methods of breastfeeding that can be modified to meet both mothers' and infants' needs. One such method is minimal breastfeeding (Morse, et.al., 1986). In light of the finding that informants disclosed that they were minimally breastfeeding when they weaned older children, a possibility exists that minimal breastfeeding might be practical for mothers who want to work outside the home or attend school. Further investigation into the feasibility of minimal breastfeeding for this group of mothers is needed. The importance of further investigation into minimal breastfeeding is further buttressed by this group of mothers' belief that frequent suckling is needed to stimulate breastmilk production.

A final implication for nursing practice is the need for further research on the infant feeding practices of the northern Alberta Woodlands Cree. Quantitative surveys are needed to determine the number of mothers breastfeeding, the duration of breastfeeding and the time at which weaning is initiated.

Recommendations for Further Nursing Research

Further nursing research is needed to establish effective teaching and support with respect to infant feeding among the northern Alberta Woodlands Cree. In particular the following areas warrant further investigation:

First, investigation of the impact of taking childbirth out of the context of its culture for the northern Alberta Woodlands Cree is warranted. Additionally, study is wanting of the effect of this decontextualization in childbirth practice on the decision to breastfeed and on decisions affecting the duration of breastfeeding.

Secondly, investigation of the advice and support given by health professionals to Woodlands Cree mothers should be conducted. Mothers reported on their perceptions of the type of advice or support given by health professionals. Lacking, however, are the perceptions of health professionals vis-a-vis their recollection of their advice and support.

Identification of gaps in communication between health professionals and mothers holds the potential for developing more effecting teaching strategies.

Thirdly, a large segment of Native Canadian mothers are teenagers (Stewart & Steckle, 1987). Therefore, investigations of teenage mothers' infant feeding practices are needed.

A fourth worthy area of investigation relates to informants' reports of cold-causing illness. In a parallel sense, informants' belief of warmth as a therapeutic agent should be researched. In order to facilitate health promotion and disease prevention a clearer understanding of how cold causes disease and warmth prevents or counteracts it, is needed.

Finally, an exploration should be contemplated of minimal breastfeeding as an option for Woodlands Cree mothers who find that the demands of their lifestyles are not conducive to breastfeeding. This exploration might be able to determine the age at which these Woodlands Cree mothers can begin to minimally breastfeed an infant.

Summary and Conclusions

Traditional cultural practices promoted healthy childbearing and infant feeding for this group of northern Alberta Woodlands Cree. Presently, childbearing has been taken out of the context of its culture for mothers. The overall effect of this removal of childbearing from the context of its culture for this group of people remains undetermined.

Despite changes in lifestyle and concurrent changes in infant feeding, present-day mothers still engage in vestiges of traditional infant feeding and care practices. These mothers persist in following cultural prescriptions for breastfeeding and furthermore, maintain traditional beliefs with respect to infant feeding and care.

Present-day mothers transference from breast to bottle feeding coupled with shorter duration of breastfeeding is related to lifestyles which are not conducive to breastfeeding. These mothers all attest to the value of breastmilk for a baby, but are unable to successfully breastfeed due to their current lifestyles. In some cases, the absence of a doula (Raphael,

1973) has resulted in mothers who feel unprepared and frightened when attempting to breastfeed. For these women, as other researchers (Morse,1986; Raphael, 1985; Williams, 1986) have identified, the tailoring of breastfeeding to fit mothers' lifestyles is necessary for successful breastfeeding.

The strength of this research lies in the self-reports given by mothers explaining their perceptions and experiences of infant feeding. The flexible nature of the unstructured interview allowed for clarification and elaboration of responses. The sample size was adequate because numerous accounts of this group of northern Alberta Woodlands Cree infant feeding practices and beliefs were obtained.

Future research is needed to further document specific northern Alberta Woodlands Cree infant feeding practices. Additionally, quantitative surveys are needed to determine the number of mothers breastfeeding, the duration of breastfeeding and the time at which weaning is initiated. On a more abstract level, investigations are needed which explore the effect of taking childbearing out of its cultural context. Additionally, the effect of the changing religious, health and educational systems on group solidarity, health and family relations for this group of people warrants further investigation.

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APPENDIX A

LETTER TO THE BAND

9807 91 Avenue
Edmonton Alberta
T6E 2T5

Chief Band Council
Desmarais Alberta T0G 0T0

Dear Chief and Band Council:

Since I have left your community, I have been studying at the University of Alberta. I am a graduate student in the Faculty of Nursing. As part of my program of study I have a special project to do. I am allowed to choose a topic that I feel is important to learn about.

For my topic I would like the Band members to teach me about the traditional and current infant feeding practices and beliefs. If you support my project, I would appreciate it if you could write me a letter for my teachers that states that you agree to let me do this. To learn from the band members I would interview them if they agreed to be interviewed. I would be asking band members to teach me about infant feeding practices and beliefs.

At the end of the project I will write a report on all I have learned. I believe that this report will be valuable to the Band as a record of traditional ways as well as to new mothers.

I hope this is agreeable to you. Thank you very much for your time and consideration.

I anxiously wait for your reply.

Sincerely,

Wendy Neander

APPENDIX B

INFORMED CONSENT FORM

University of Alberta
Faculty of Nursing

Informed Consent Form

Project Title: The Cultural Context of Infant Feeding Practices among the Northern Alberta Woodlands Cree

Researcher: Wendy Neander **Telephone:** (403) 439-0118

Supervisor: Dr. Janice Morse **Telephone:** (403) 432-6250

The University of Alberta requires that all students talking to people for special projects, have the people's permission to talk to them. This form is to make sure you understand why I will be talking to you.

The purpose of this project is for me to learn about northern Alberta Woodlands Cree infant feeding practices from Cree women. This information is valueablefor nurses in that they can better assist women with infant feeding if they understand how women feed their infants.

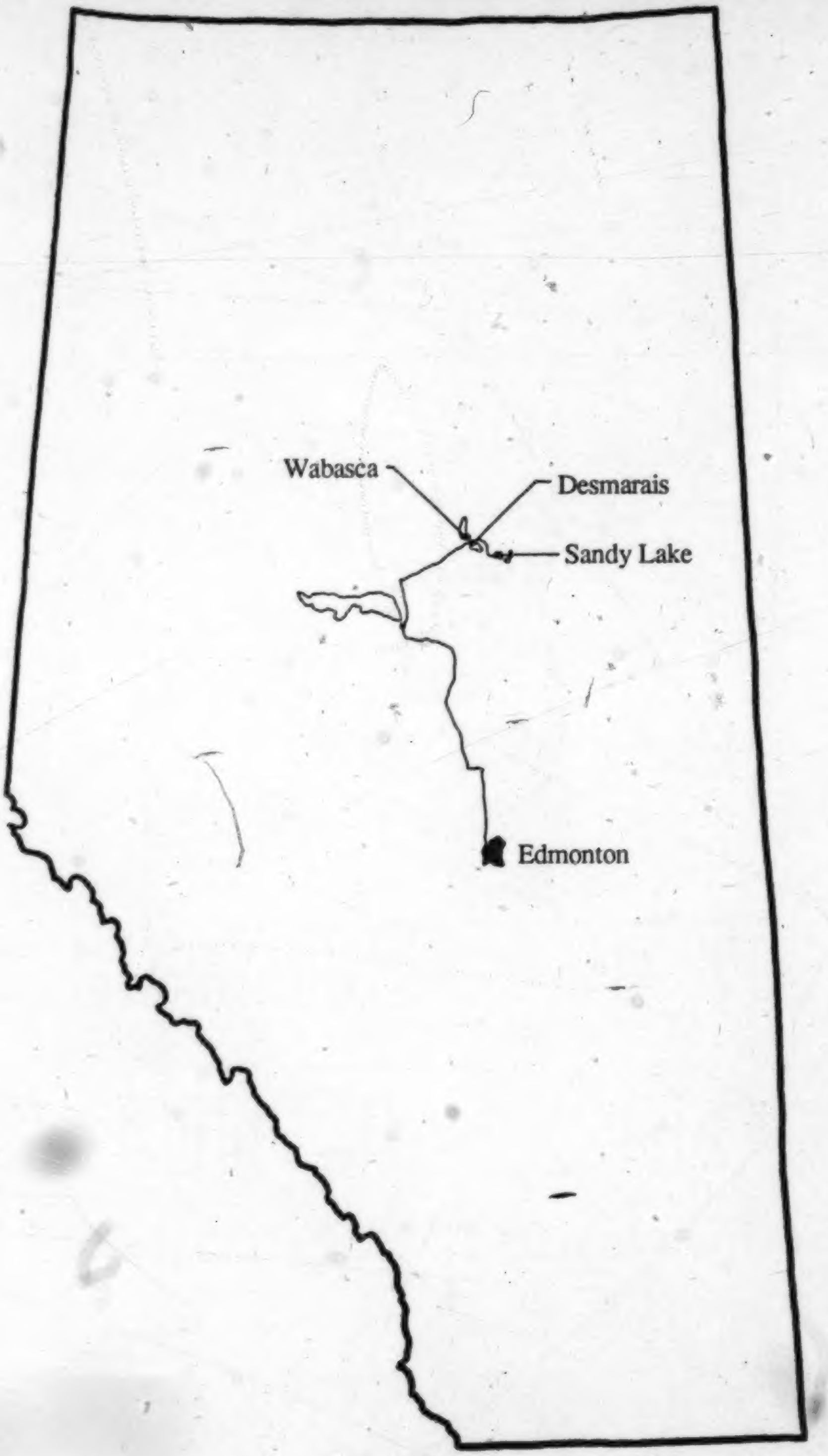
I ____________________, understand that Wendy Neander will be talking to me alone or with two to four other women from Desmarais, Wabasca or Sandy Lake, to learn about how we feed our babies. I also understand that these meetings will last from sixty to ninety minutes and take place about three times. I also understand that I do not have to talk with Wendy Neander if I do not want to and may change my mind during these meetings and decide not to talk or answer questions. I understand that Wendy Neander will be taperecording these discussions and observing us as we teach her about how we feed our babies. I understand that Wendy Neander will be writing a report about what we teach her, but will not put our names with anything we tell her. I also understand that Wendy Neander will be using the information we tell her to teach other nurses, so that they can better assist Cree women when needed with infant feeding.

____________________ Participant	____________________ Witness	____________________ Researcher

____
Date

APPENDIX C

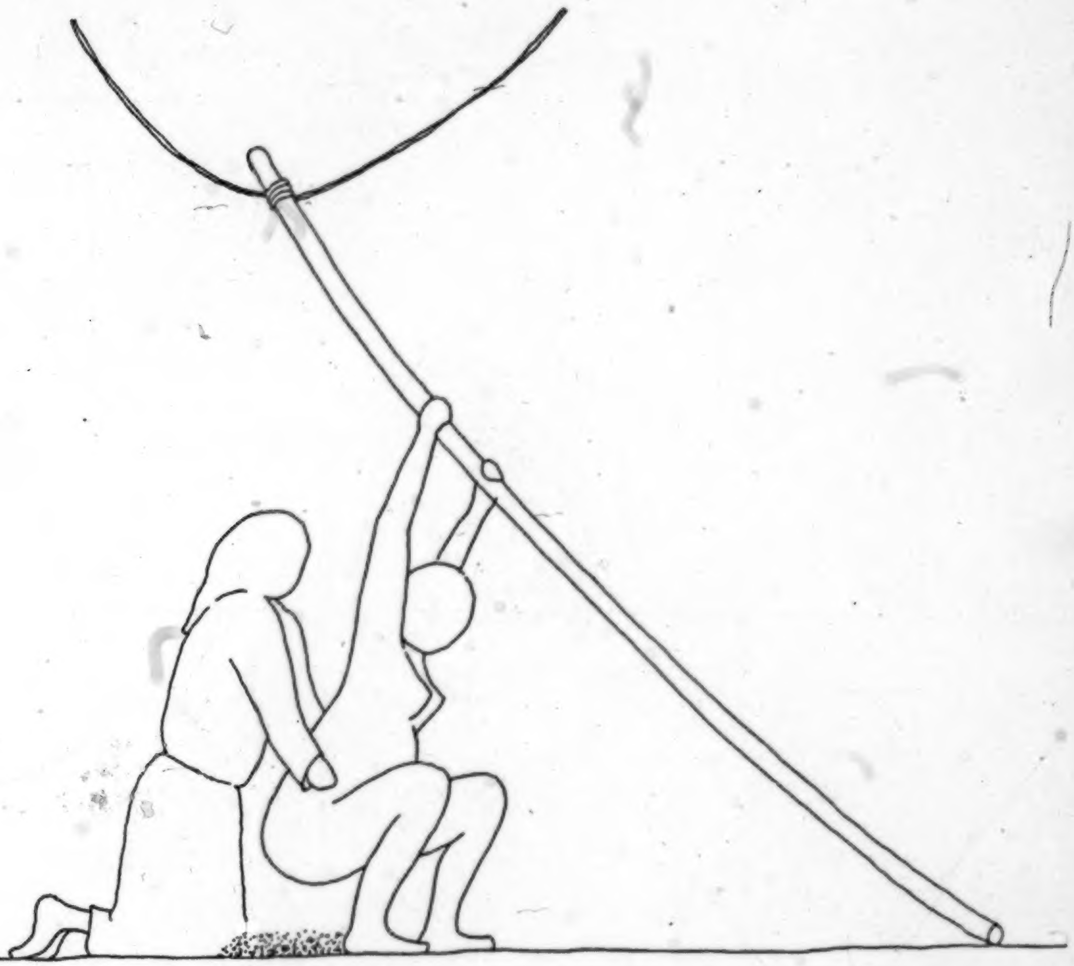
MAP OF THE AREA


Wabasca
Desmarais
Sandy Lake
Edmonton

Map of Area

APPENDIX D

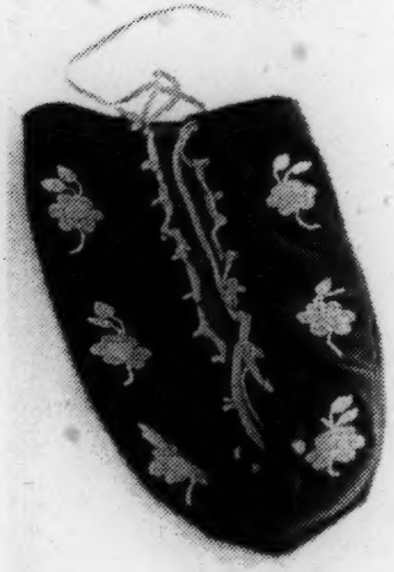
TRADITIONAL POSITION FOR CHILDBIRTH



Traditional Position for Childbirth

APPENDIX E

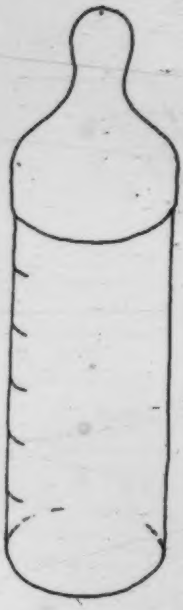
MOSS BAG



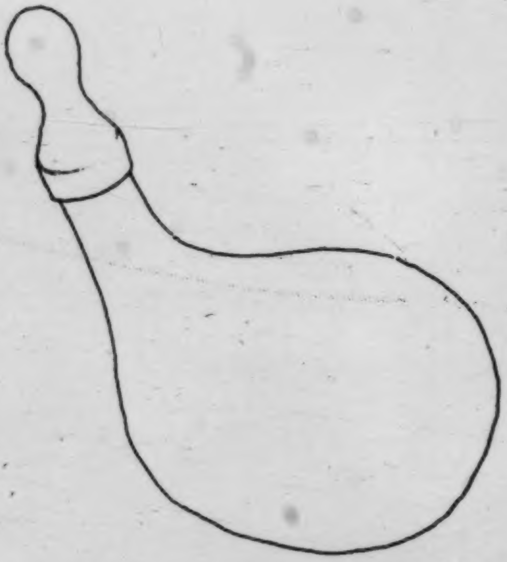
Moss Bag

APPENDIX F

INFANT BOTTLES



1940

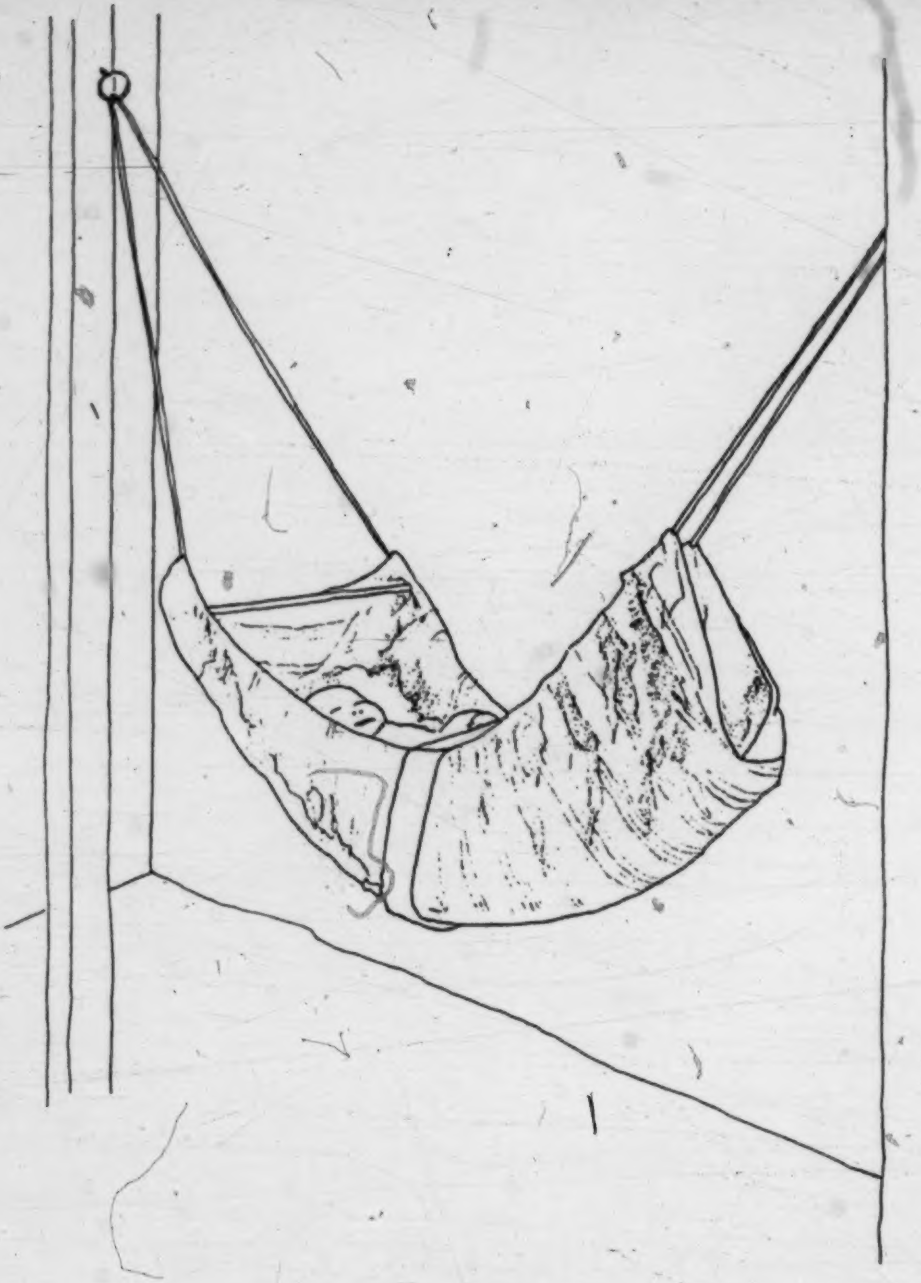


1919

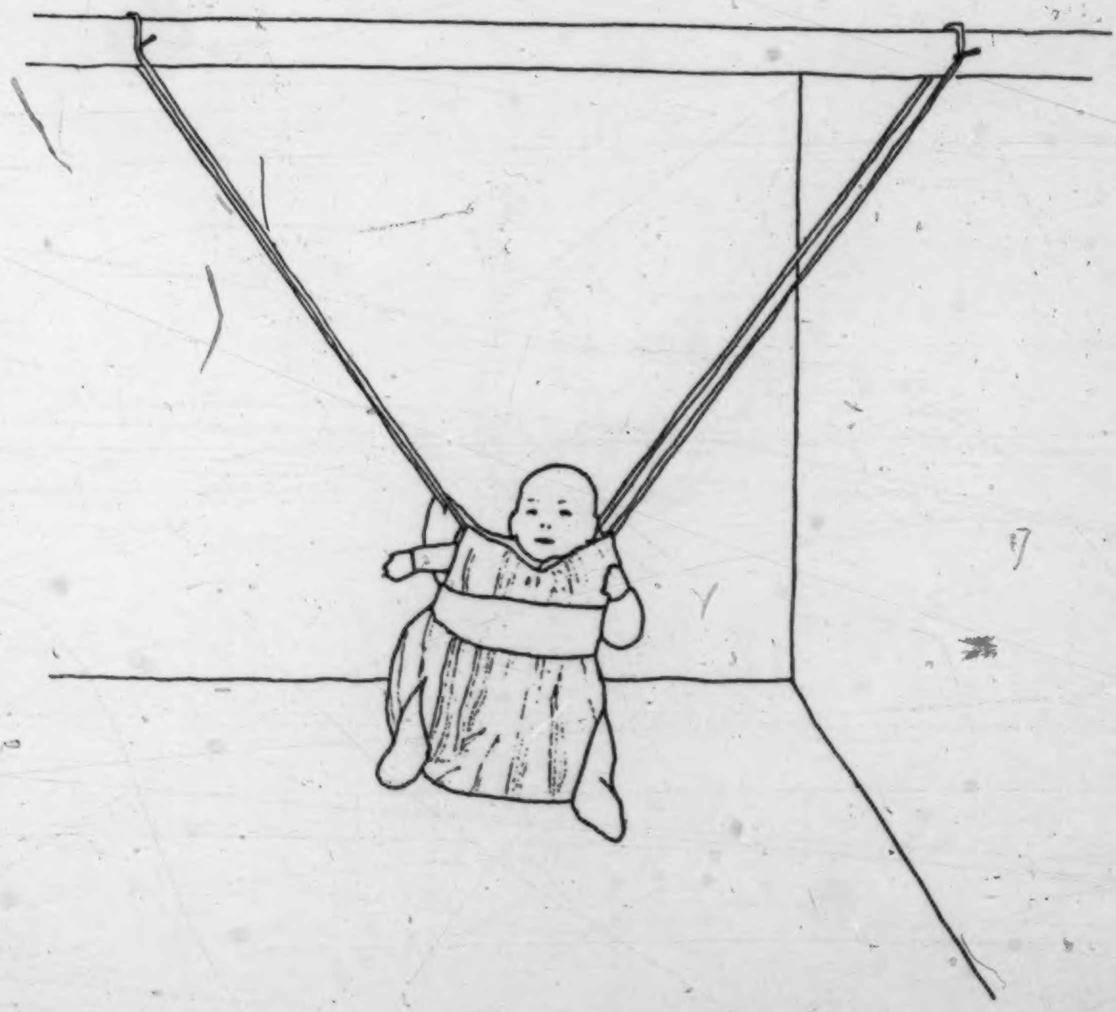
Infant bottles

APPENDIX G

INDIAN SWING



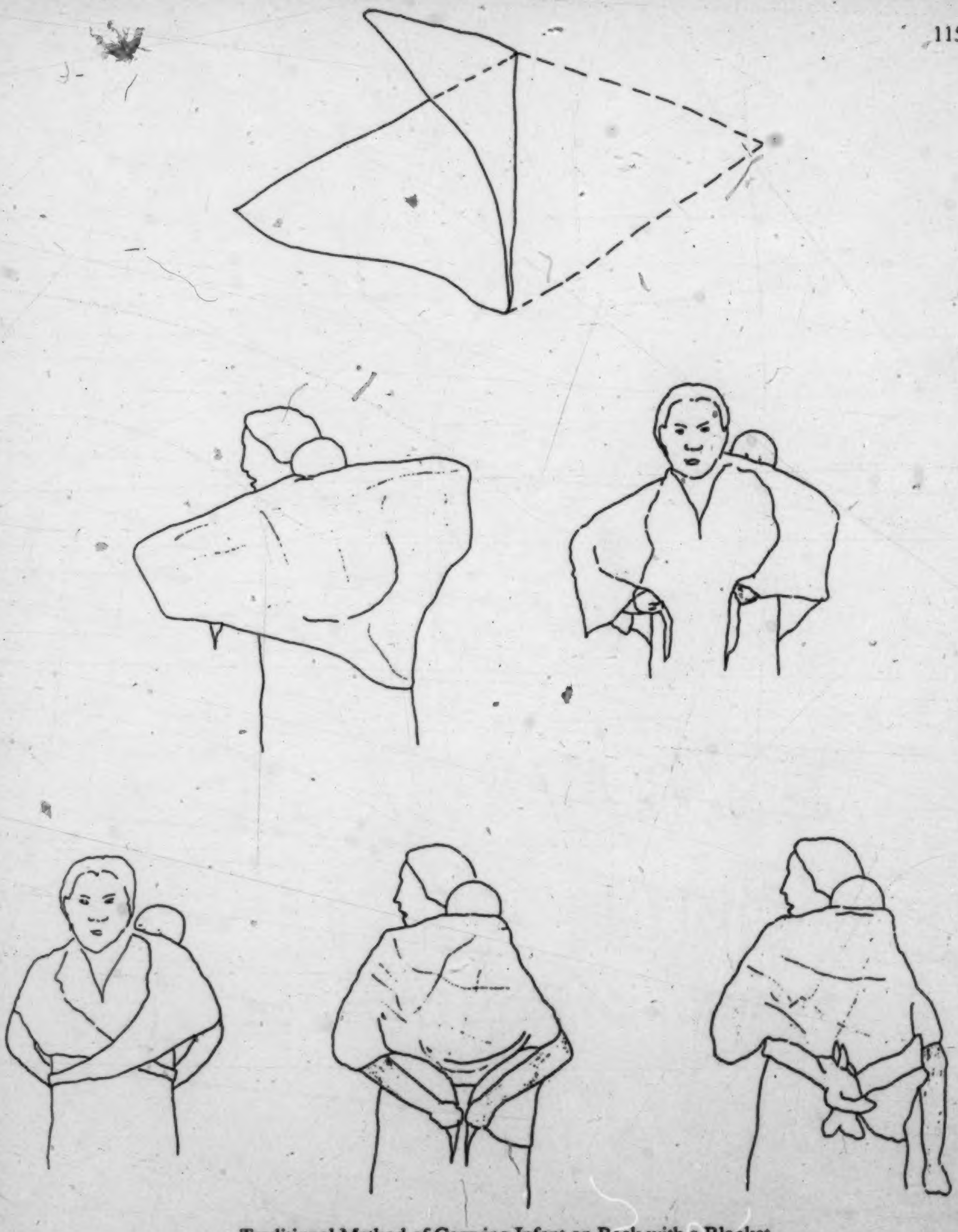
Indian Swing



Indian Swing

APPENDIX H

TRANSPORTING INFANT ON MOTHER'S BACK



Traditional Method of Carrying Infant on Back with a Blanket